

Appendix H

TRANSPORTATION CONFORMITY REPORT

May, 2001



2001 RTP Technical Appendix

To facilitate documentation of transportation conformity related analysis, the PM₁₀ regional emission analysis for conformity findings of the portions of the 2001 RTP in the San Bernardino County portion of MDAB and the Coachella Valley portion of SSAB were incorporated into this report to provide a single document.

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I. PREFACE

The federally required conformity analyses for the 2001 Regional Transportation Plan (RTP) Update were presented as a stand-alone technical appendix titled Transportation Conformity Report. This document is in response to federal agencies' requests that such a document be prepared separately.

The Conformity Analysis covers all federally required analyses for conformity determination of the 2001 RTP Update. All transportation and air quality conformity analyses in this document are in compliance with the Environmental Protection Agency (EPA) Transportation Conformity Rule (40 CFR Parts 51 and 93, published on August 15, 1997). Additionally, the conformity analyses are consistent with all court cases and the U. S. Department of Transportation's Transportation Equity Act for the 21st Century (TEA- 21, Planning Regulations). This Technical Appendix contains three sections that specifically address the conformity analysis required for federal approval and are as follows:

Conformity Requirements

This section reflects all of the conformity requirements and highlights the required conformity findings. A series of exhibits are enclosed at the end of this section, which provide related documentation.

Modeling Summary for Regional Emissions Analyses

This section provides all of the modeling methodologies and assumptions employed in conformity determination of the 2001 RTP Update regional emissions with the respective Air Quality Management Plan (AQMP)/State Implementation Plan (SIP).

Timely Implementation of Transportation Control Measures (TCMs)

This section highlights the conformity findings of the Timely Implementation of TCMs and describes the implementation status of all applicable TCMs in the South Coast Air Basin and the Ventura County portion of the South Central Coast Air Basin.

II. CONFORMITY REQUIREMENTS AND FINDINGS

Introduction

The Southern California Association of Governments (SCAG), as the Metropolitan Planning Organization (MPO) for Southern California, is mandated to comply with Federal and State transportation and air quality regulations.

Federal transportation and air quality regulations are outlined in the Transportation Equity Act for the Twenty-first Century (TEA-21) and the Federal Clean Air Act (CAA). The TEA-21 authorizes Federal funding for highway, highway safety, transit, and other surface transportation programs. The CAA establishes air quality standards for various health-hazardous pollutants.

California State requirements for air quality management are incorporated into the State Implementation Plans (SIP) for those pollutants stipulated in the CAA. The SIPs set forth the goals and objectives for achieving CAA air-quality standards.

State and Federal Requirements

Federal Non-Attainment Areas

The Environmental Protection Agency (EPA) may make a Federal “non-attainment area” designation to any area that has not met CAA health standards for one or more pollutant. A non-attainment area designation may require additional air-quality controls for transportation plans, programs, and projects.

State Implementation Plans (SIP)

To comply with the CAA in achieving the National Ambient Air Quality Standards (NAAQS), the California Air Resources Board (ARB) develops SIPs for Federal non-attainment areas. In California, SIP development is a joint effort of the local air agencies and ARB working with Federal, State, and local agencies (including the MPOs). Local Air Quality Management Plans (AQMPs) are prepared in response to Federal and State requirements.

The SIP includes two important factors for transportation and air quality conformity analysis – emissions budgets and Transportation Control Measures (TCM). Emissions budgets set an upper limit which transportation activities are permitted to emit. TCMs are strategies to reduce emission from on-road mobile sources.

ARB recommends the federal non-attainment area boundaries to EPA for final designations. Subsequently, the EPA finalizes and defines the boundaries of the federally designated non-attainment areas for each criteria pollutant (as defined below). In general, each Federal non-attainment area should be in one air basin. However, in the SCAG region, one Federal non-attainment area may cover portions of several air basins. In California, the ARB or State legislature defines the air basins.

Federal Transportation Conformity Rule

In compliance with the CAA requirements, the Transportation Conformity Rule establishes regulatory provisions for processing transportation plans, programs, and projects in non-attainment areas under Title 23 U.S.C., the Federal Transit Act, and Section 176(c) of the 1990 CAA Amendment. The Rule also regulates conformity to the SIPs.

The first complete Transportation Conformity Rule was published in November 1993 and has been amended three times. The most recent Transportation Conformity Rule is found at 40 CFR parts 51 and 93 (published on August 15, 1997). Since its last publication, two court cases have changed parts of the Transportation Conformity Rule:

- Ø The U.S. Court of Appeals November 4, 1997 ruling in Sierra Club v. EPA deleted the grace period for the non-attainment area designation. The new transportation conformity requirements apply to new non-attainment area designations. Also, Section 93.102(d) [the grace period...] of the August 1997 Transportation Conformity Rule was deleted.
- Ø The U.S. Court of Appeals March 2, 1999 ruling in EDF v. EPA, mandated that submitted emission budgets cannot be used for conformity determinations. Only emissions budgets approved or found adequate by EPA are to be used for conformity determinations.

Regional Transportation Planning Processes

2001 Regional Transportation Plan (RTP) Update

TEA-21 requires that SCAG develop a RTP for a 20-year minimum period. Additionally, SCAG must develop a Regional Transportation Improvement Program (RTIP) to implement the RTP. In non-attainment areas, the RTP and RTIP must comply with the transportation conformity requirements of the EPA Transportation Conformity Rule.

TEA-21 and the Transportation Conformity Rule, in non-attainment and maintenance areas, require the RTP be updated at a minimum of every three years. The 1998 RTP, approved by the Federal Highway Administration (FHWA) and the

Federal Transit Administration (FTA) on June 9, 1998, will expire on June 9, 2001. The 2001 RTP Update replaces the 1998 RTP.

Criteria Pollutants and Air Basins

Criteria Pollutants

Transportation activities, particularly motor vehicles (on-road mobile sources), are major causes of air pollution. Four criteria pollutants are subject to air quality conformity for the RTP and RTIP:

- Ø Carbon Monoxide (CO) is a product of automobile exhaust. CO reduces the flow of oxygen in the bloodstream and is particularly dangerous to persons with heart disease.
- Ø Ozone is formed by the reaction between Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NO_x) in the presence of sunlight. Ozone negatively impacts the respiratory system.
- Ø Nitrogen Dioxide (NO₂) is created under the high pressure and temperature conditions in internal combustion engines. It impacts the respiratory system and degrades visibility due to its brownish color.
- Ø Particulate matter less than 10 microns in size (PM₁₀) are tiny particulates of dust and soot that cause irritation and damage to the respiratory system.

Air Basins and Air Districts in the SCAG Region

Federal non-attainment areas are usually described by their air basin geographies. SCAG is a six-county region that contains four air basins (administered by five air districts):

- Ø The South Coast Air Basin (SCAB) covers the urbanized portions of the Los Angeles, Riverside, and San Bernardino counties as well as the entire county of Orange and is also within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).
- Ø The Ventura County portion of the South Central Coast Air Basin (VC/SCCAB) covers Ventura County and is within the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD).
- Ø The Mojave Desert Air Basin (MDAB) covers the desert portions of the Los Angeles, Riverside, and San Bernardino counties. A small portion of this air basin is in Kern County and outside of the SCAG region. The SCAG portion of this air basin is under the jurisdiction of three air districts:

- Mojave Desert Air Quality Management District (MDAQMD) administers portions of the MDAB situated in San Bernardino County and eastern Riverside County. The Riverside County portion is known as the Palo Verde Valley Area.
- South Coast Air Quality Management District (SCAQMD) administers the portion of MDAB in Riverside County situated between the SSAB and the Palo Verde Valley Area.
- Antelope Valley Air Pollution Control District (Antelope APCD) administers the Los Angeles County portion of the MDAB.

Ø Salton Sea Air Basin (SSAB) covers all Imperial County and the eastern desert portion of Riverside County. This air basin is under jurisdiction of two air districts:

- Imperial County Air Pollution Control District (ICAPCD) administers the Imperial County portion of the SSAB.
- South Coast Air Quality Management District (SCAQMD) administers the Riverside County portion of the SSAB situated between the SCAB and the MDAB.

(The boundaries of the air basins and air districts are illustrated in Exhibit A)

Non-Attainment Area Boundaries

Non-Attainment Areas and Timeframes

The boundaries of the Federal non-attainment areas [and their respective attainment years for compliance] in the SCAG region are as follows:

- Ø SCAB (excluding the Banning Pass Area) - The entire basin is a non-attainment area for the following pollutants: CO [2000]; 1-hour Ozone [2010]; NO₂ [1995]; and PM₁₀ [2006].
- Ø Ventura County Portion of SCCAB - The entire county is a non-attainment area for 1-hour Ozone [2005].
- Ø Antelope Valley Portion of MDAB - The entire desert portion of Los Angeles County (known as Antelope Valley) is a non-attainment area for 1-hour Ozone [2007].
- Ø San Bernardino County Portion of MDAB
 - With the exception of the northern and eastern parts of the County the rest is a non-attainment area for 1-hour Ozone [2007].

Searles Valley (situated in the NW part of the County) is non-attainment for PM₁₀ [1994].

San Bernardino County (excluding the Searles Valley area) within the MDAB is a non-attainment area for PM₁₀ [2000].

- Ø Riverside County Portion of SSAB - The entire Riverside County portion of SSAB (Coachella Valley – including the Banning Pass Area) is a non-attainment area for the following pollutants: 1-hour Ozone [2007]; PM₁₀ [1995].

Note: Of the above-referenced areas, two are not congruent with ARB defined air basin and air district boundaries for certain pollutants:

- Ø SCAB (Excluding the Banning Pass Area)
- Ø MDAB (Antelope Valley & San Bernardino County)/SSAB (Coachella Valley & Banning Pass)

Proposed Eight-Hour Ozone Non-attainment Areas

An eight-hour Ozone non-attainment area is designated for an area where a high level of Ozone is measured for a minimum of eight hours per day. On March 23, 2000, the ARB recommended to the EPA the following areas as Federal 8-hour ozone non-attainment areas:

- Ø The entire SCAB
- Ø The Antelope Valley portion of MDAB
- Ø The portion of San Bernardino County of MDAB
- Ø The Coachella Valley portion of SSAB
- Ø The Imperial County portion of SSAB
- Ø The Ventura County portion of SCCAB

Note: The EPA may finalize these designations by mid summer 2001. Conformity determination will be required 12 months after the designations become effective.

(The boundaries of federal non-attainment areas are illustrated in Exhibit A).

SIP Status and Conformity

Applicable Emissions Budgets

The 2001 RTP must conform to the applicable SIPs [emissions budgets and the Transportation Control Measures (TCMs)]. The March 1999 Court ruling mandated those submitted budgets no longer be used for conformity findings. Only those emission budgets approved or found adequate for conformity determinations by EPA can be used for the regional emission analyses. The applicable TCMs are those approved by EPA. For the 2001 RTP conformity determinations, the applicable emissions budgets and TCMs are established in the following SIPs:

- Ø Ozone SIPs - The emissions budgets established in the 1994 Ozone (1-hour standard) SIPs for the Antelope Valley of MDAB, the portion of San Bernardino County of MDAB, the Coachella Valley of SSAB, and the Ventura County portion of SCCAB function as the applicable emissions budgets for conformity analysis. The emissions budgets established in the 1997 Ozone SIP (1-hour standard) for SCAB function as the applicable emissions budgets for conformity analysis.
- Ø Nitrogen Dioxide (NO₂) SIP - The emissions budgets established in the 1997 NO₂ SIP (Maintenance Plan) for SCAB function as the applicable emissions budgets for conformity analysis.

(For applicable emission budgets see Exhibit B)

Emissions Budgets Tables

A summary of the applicable emissions budgets by pollutant by years of analysis (milestone, attainment, and planning horizon years) are presented in the following tables:

Ozone Emissions Budgets (tons/day)						
Summer Temperatures						
SCAB (Excluding Banning Pass)						
Ozone Precursors	2002	2005	2008	2010	2020	2025
ROG (VOC)	273.103	206.034	145.354	80.733	80.733	80.733
NO _x	447.119	369.122	310.078	277.766	277.766	277.766

Established in SCAQMD 1997 AQMP / SIP; Emissions budgets generated using EMFAC 7G

NO ₂ Emissions Budgets (tons/ day)					
Winter Temperatures					
SCAB (Excluding Banning Pass)					
NO ₂ Precursor	1994	2000	2010	2020	2025
NO _x	657.30	657.30	657.30	657.30	657.30

Established in SCAQMD 1997 AQMP/SIP; Emissions budgets generated using EMFAC 7G

Ozone Emissions Budgets (tons/ day)						
Summer Temperatures VC/SCCAB						
Ozone Precursors	1999	2002	2005	2010	2020	2025
ROG (VOC)	16.20	12.47	9.82	9.82	9.82	9.82
NO _x	27.04	24.36	21.33	21.33	21.33	21.33

Established in VCAPCD's 1994 AQMP/SIP; Emissions budgets generated using EMFAC 7F

Ozone Emissions Budgets (tons/day)							
Summer Temperatures MDAB / SSAB (Southeast Desert Modified Area)							
Ozone Precursors	1999	2002	2005	2007	2010	2020	2025
ROG (VOC)	36.25	31.07	26.45	23.31	23.31	23.31	23.31
NO _x	70.03	65.79	57.06	54.82	54.82	54.82	54.82

Established in MDAQMD& SCAQMD's 1994 AQMP / SIP; Emissions budgets generated using EMFAC 7F

Applicable TCMs

The SIP documents for the applicable TCMs are listed below:

- Ø SCAB (excluding Banning Pass) - The TCM categories established in the 1997 Ozone AQMP / SIP for SCAB function as the applicable TCMs for conformity finding (timely implementation of TCM analysis). The 1997 Ozone SIP (as amended in 1999) was approved on April 10, 2000. The 1994 Ozone SIP was the prior applicable SIP and the TCM1 categories in both documents are consistent.
- Ø Ventura County of SCCAB - The strategies incorporated in the 1994 Ozone AQMP / function as the applicable TCMs for conformity finding (timely implementation of TCM analysis).

There are no applicable TCMs in any other federal non-attainment areas in the SCAG region. For analysis on the timely implementation of the TCM, see Section IV of this volume.

Submitted SIPs

The ARB has submitted the SIPs for all other Federal non-attainment areas in the SCAG region to the EPA. With the exception of the Imperial County portion of SSAB, the following SIPs contain emissions budgets for the on-road mobile sources which require EPA approval or adequacy finding:

- Ø 1997 SIPs (CO and PM₁₀) for SCAB;
- Ø 1997 PM₁₀ SIP for SSAB (Coachella Valley);

Ø 1995 PM₁₀ SIP for MDAB (San Bernardino County –excluding Searles Valley);

Ø 1996 PM₁₀ SIP for MDAB (Searles Valley)

This area has been under conformity suspension since April 23, 1999, when the US DOT informed SCAG of the impact of the March 2, 1999 court ruling that the submitted budgets cannot be used for conformity determinations. Also there are no projects or programs proposed for transportation improvement by the 2001 RTP for this area.

Ø SSAB (Imperial County)

The Imperial County portion of SSAB is a designated non-attainment area for PM₁₀ and a transitional Ozone area.

In October 1993, ARB submitted a PM₁₀ SIP to EPA. The SIP was the result of a joint effort by the ICAPCD and ARB. Due to the deferment of the attainment demonstration, the PM₁₀ SIP has neither emission budgets for on-road mobile sources nor transportation control measures. As of the date of this analysis, EPA has not taken any action on the submitted PM₁₀ SIP.

There is no Ozone air quality attainment plan for Imperial County and, therefore, there are no emission budgets or TCMs.

The EPA Transportation Conformity Rule requires that SCAG make a conformity determination of its RTP and RTIP in the non-attainment areas of Imperial County. The SCAG regional emission analysis for conformity determinations in Imperial County is based on build/no-build tests of emission for both PM₁₀ and ozone pollutants.

Evaluation of Effectiveness of Control Factors

In April 2000, ARB informed SCAG of shortfalls in the Ozone SIP. The SIP shortfalls were severe in SCAB and have been caused by the failure to fully implement certain State sponsored control measures. Other Ozone non-attainment areas are minimally impacted. However, on July 28, 2000, ARB has remedied the SIP shortfalls. On August 18, 2000, ARB released a set of revised control factors that are being used in the 2001 RTP Update– conformity analysis. The new control factors credit the State full commitment in the applicable 1997 Ozone SIP (as amended in 1999) for emission reductions from on-road mobile sources.

Changes Between Draft and Final 2001 RTP Update Affecting Conformity Analysis (Modeling)

The following listed changes were incorporated into the final modeling of the 2001 RTP Update for the required conformity analysis (regional emission analysis). The changes were made base on the comments received during the comment period, discussion with the Federal Highway Administration (FHWA) / the Federal Transit Administration (FTA), and the SCAG Regional Council's actions on April 12, 2001.

- Ø **Maglev Projects:** No Maglev project is incorporated into the 2010 conformity analysis of the 2001 RTP Update (no VMT and emission reduction benefits for the 2010 conformity findings). The LAX-March Maglev project anticipated to be completed by private sector. The year 2020 conformity finding was benefited from implementation of LAX-March Maglev project (VMT and emission benefits were included in the year 2020 for conformity finding of the 2001 RTP Update in SCAB). All other Maglev projects in the 2001 RTP Update have been planned for completion by the year 2025, including their associated VMT and emission reduction benefits.
- Ø **710 Freeway Gap Closure Project (Valley Blvd. to 210 FRWY):** The segment between Valley Boulevard to Huntington Drive of the 710 Freeway Gap Closure project is incorporated into the 2001 RTP Update for completion the year 2010. The remainder of the 710 Freeway Gap Closure project (Huntington Drive to 210 Freeway) is incorporated into the 2001 RTP for completion by the year 2020.

Note that construction of Arbor Vitae Avenue/405 Freeway Interchange (City of Inglewood) was removed from the 2001 RTP Update.

Conformity Analysis and Findings

Required Transportation Conformity Analyses

Under EPA's Transportation Conformity Rule requirements SCAG's 2001 RTP Update needs to pass four tests as follows:

- Ø Regional Emission Analysis
(Sections 93.109, 93.110, 93.118, and 93.119)
- Ø Timely Implementation of TCMs Analysis
(Section 93.113)
- Ø Financial Constraint Analysis
(Section 93.108)

Ø Interagency Consultation and Public Involvement Analysis
(Sections 93.105 and 93.112)

Regional Emissions Analyses

EPA's Transportation Conformity Rule requires that the 2001 RTP Update regional emissions be consistent with the motor vehicle emissions budgets in the applicable SIPs (section 93.118). Consistency with emissions budgets must be demonstrated for each year for which the applicable emissions budgets are established, for the transportation planning horizon year, and for any milestone years as necessary so that the years for which consistency is demonstrated are no more than ten years apart.

Summary of the 2001 RTP Update Regional Emissions Analyses

As mandated by the Conformity Rule, to pass a regional emission test for conformity finding, the test must meet one of the following requirements:

- Ø For the budget test, the regional emissions must be equal or less than the emission budgets.
- Ø For the PM₁₀ build/no-build test, the build scenario's emission must be less than the no-build scenario's emission.
- Ø For the Ozone or CO build/no-build test, the build scenario's emission must be less than the no-build scenario's emission and additionally the future year emission must be less than the 1990 base year emission.

Note: The build scenario means implementing the RTP and the no-build scenario means not completing the RTP.

SCAG modeling methodologies and regional emissions analyses are elaborated in Section III - Modeling Summary.

A summary of the SCAG produced regional emissions analyses (conformity findings) are tabulated in the following tables. The following tables are organized by air basin geography for regional emissions analyses.

Ozone Emissions Analysis (tons/day)							
Summer Temperatures							
SCAB (Excluding Banning Pass)							
Ozone Precursor		2002	2005	2008	2010	2020	2025
ROG (VOC)	Budget	273.103	206.034	145.354	80.733	80.733	80.73
	2001 RTP	269.499	201.738	143.900	80.311	49.734	46.308
NO _x	Budget	447.119	369.122	310.078	277.766	277.766	277.766
	2001 RTP	446.257	360.172	284.059	249.643	234.734	237.921

Regional emissions budget generated using EMFAC 7G. To pass, RTP emission must be equal of less than budget

NO ₂ Emissions Analysis (tons/day)						
Winter Temperatures						
SCAB (Excluding Banning Pass)						
NO ₂ Precursor		1994	2000	2010	2020	2025
NO _x	Budget	657.30	657.30	657.30	657.30	657.30
	2001 RTP	---	---	379.91	359.94	366.05

Regional emissions generated using EMFAC 7G. To pass, RTIP emission must be equal of less than budget.

CO (tons/day)					
Winter Temperatures					
SCAB (Excluding Banning Pass)					
CO	1990	2000	2010	2020	2025
Build	---	---	1,851.30	1,510.01	1,515.62
No-build	7,380.76	3,464.84	1,881.34	1,587.99	1,623.35

Regional emissions generated using EMFAC 7G. To pass, build emission must be less than no-build and 1990.

PM ₁₀ (tons/day)						
Annual Average Temperatures						
SCAB (Excluding Banning Pass)						
PM ₁₀ Precursor	1990 (base year)	2000	2006	2010	2020	2025
ROG (VOC)	861.38	351.85	228.24	145.83	91.99	86.40
NO _x	889.73	565.08	448.64	370.73	352.28	358.43

To pass, the future year emissions must be less than 1990 (base year).

Primary Particulate Matter	1990 (base year)	2000	2006	2010	2020	2025
Build	---	---	215.526	230.350	264.486	276.830
No Build	---	190.718	215.674	232.311	272.268	287.815

Regional emissions generated using EMFAC 7G. To pass, build emission must be less than no-build. The roadway construction-related PM10 emission were included in the regional emission analysis.

Ozone (tons/day) Summer Temperatures SCCAB-Ventura County							
Ozone Precursors		1999	2002	2005	2010	2020	2025
ROG (VOC)	Budget	16.20	12.47	9.82	9.82	9.82	9.82
	2001 RTP	---	11.58	9.65	6.04	4.86	3.20
NO _x	Budget	27.04	24.36	21.33	21.33	21.33	21.33
	2001 RTP	---	22.78	19.13	13.47	13.91	13.42

Regional emissions generated using EMFAC 7F. To pass, RTP emission must be equal of less than budget.

PM₁₀ (tons/day) Annual Average Temperatures MDAB San Bernardino County (excluding Searles Valley)				
	2005	2010	2020	2025
Build	14.523	16.442	21.483	22.364
No-build	15.597	17.171	21.640	23.585

To pass: the build scenario's emissions must be less than no-build. The roadway construction-related and unpaved road PM₁₀ emissions were included in the regional emissions analysis.

Ozone (tons/day) Summer Temperatures MDAB/SSAB * (Southeast Desert Modified Area)							
MDAB /	SSAB (*)	2002	2005	2007	2010	2020	2025
ROG	Budget	31.07	26.45	23.31	23.31	23.31	23.31
	2001 RTP	18.77	16.20	14.20	11.57	10.70	7.84
NO _x	Budget	65.79	57.06	54.82	54.82	54.82	54.82
	2001 RTP	45.24	40.20	37.72	34.19	40.84	40.66

Regional emissions generated using EMFAC 7F. To pass, RTP emission must be equal of less than budget.

Note: This federally designated Ozone non-attainment area covers three separate but contiguous areas: the Antelope Valley portion of MDAB, the San Bernardino County portion of MDAB, and the Coachella Valley (including Banning Pass) portion of SSAB. The conformity analyses for the NO_x and ROG are based on comparing SCAG's regional transportation emissions with the combined budgets of the three parts. The Coachella Valley and Antelope Valley's emissions budgets are reflected in SCAQMD's 1994 AQMPs/SIPs and the San Bernardino County emissions budgets are reflected in the MDAQMD 1994 AQMP/SIP.

PM₁₀ (tons/day) Annual Average Temperatures SSAB - Riverside County (Coachella Valley including Banning Pass)				
PM₁₀	2005	2010	2020	2025
Build	9.805	11.347	15.981	17.464
No-build	10.180	11.762	16.536	18.172

To pass: the build scenario's emissions must be less than no-build. The roadway construction-related and unpaved road PM₁₀ emissions were included in the regional emissions analysis.

Ozone (tons/day) Summer Temperatures Imperial County					
SSAB /	(Imperial)	2000	2010	2020	2025
ROG	Build	---	4.864	4.038	4.265
	No-build	---	4.965	4.142	4.436
NO _x	Build	---	14.644	16.763	17.913
	No-build	---	14.843	16.953	18.228

Regional emissions generated using EMFAC 7F. To pass, build emission must be less than the 1990 base year or the no-build.

PM ₁₀ (tons/day) Annual Average Temperatures Imperial County				
PM ₁₀	2000	2010	2020	2025
Build	---	9.358	11.918	13.560
No-build	---	9.794	13.066	14.938

Regional emissions generated using EMFAC 7F. To pass, build emission must be less than no-build.

Searles Valley Area

The Searles Valley planning area is situated in the northwest part of San Bernardino County and is not a populated area. The area is designated as the federal non-attainment area for PM₁₀. This area is a part of the Mojave Desert Air Basin (MDAB).

There are no proposed projects or programs in the 2001 RTP Update for transportation improvements for this area. The population growth for the area is very insignificant during the next 25 years.

Since the U.S. Court of Appeals March 2, 1999 ruling invalidated the use of submitted emission budget for conformity findings, the Searles Valley area has been under the conformity suspension. The PM₁₀ final Attainment Demonstration and Maintenance Plan (SIP) was submitted to EPA by ARB in July 1996. The SIP requires additional work to be found adequate for conformity use by EPA.

Conformity Determinations

SCAG has determined the following conformity findings for the 2001 RTP under the required Federal tests:

✓ Regional Emissions Tests

- Ø Finding SCAG's 2001 RTP Update regional emissions for Ozone precursors are consistent with all applicable emissions budgets for

all milestone, attainment, and planning horizon years for the following areas:

- SCAB (excluding Banning Pass): the 1997 Ozone SIP (amended in 1999)
- SCCAB (Ventura County): the 1994 Ozone SIP
- MDAB (Antelope Valley and San Bernardino County) / SSAB (Coachella Valley – including Banning Pass): the 1994 Ozone SIPs

- Ø Finding SCAG's 2001 RTP Update regional emissions for NO₂ precursor are consistent with all applicable emissions budgets for all milestone, attainment, and planning horizon years for the SCAB (the 1997 Ozone SIP).
- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenarios) for the CO are less than no-build emissions and the future years are less than the 1990 base year emission for all milestone, attainment, and planning horizon years for the SCAB (excluding Banning Pass).
- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenarios) for the PM₁₀ precursors are less than no-build emissions for all milestone, attainment, and planning horizon years for the SCAB (excluding Banning Pass). The roadway construction-related PM₁₀ emissions were included in the regional emission analysis.
- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenarios) for the PM₁₀ are less than the no-build emission for the Imperial County portion of SSAB.
- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenarios) for the PM₁₀ are less than the no-build emissions for the San Bernardino County portion of MDAB for all milestone, attainment and planning horizon years (including all interval years). The road way construction-related and unpaved road PM₁₀ emissions were incorporated into the regional emissions analysis.
- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenarios) for the PM₁₀ are less than the no-build emissions for the Coachella Valley portion of SSAB for all milestone, attainment and planning horizon years (including all interval years). The road way construction-related and unpaved road PM₁₀ emissions were incorporated into the regional emissions analysis.

- Ø Finding SCAG's 2001 RTP Update regional emissions (build scenario) for the Ozone is less than the no-build emissions for the SSAB (Imperial County).

✓ Timely Implementation of TCM Test

- Ø Finding the TCM1 project categories listed in the 1997 Ozone SIP/AQMP (amended in 1999) for the SCAB were given funding priority and are on schedule for implementation.
- Ø Finding the TCM strategies listed in the 1994 Ozone SIP/AQMP for the VC/SCCAB are given funding priority and are on schedule for implementation.

✓ Financial Constraint Test

- Ø Finding all projects listed in the RTIP are financially constrained for all fiscal years.

✓ Inter-agency Consultation and Public Involvement Test

- Ø SCAG has determined the 2001 RTP and its associated transportation conformity analysis and finding comply with this federal requirement. All related topics were discussed through various forums such as: Transportation conformity Working Group, Modeling Task Force, numerous RTP related (topic-oriented) Task Forces, and sub-regional group, during past two years. These forums were open to the general public. For the public at large and to obtain public input and community feedback, SCAG's Public Outreach Program was used. Detailed information is included in Appendix L (RTP Task Force) and Appendix M (Public Outreach Program).
- Ø Additionally, the 2001 RTP and its associated technical appendices (including Transportation Conformity Report-Appendix H) were released in late December 2000 and early January 2001 for the public review and comment period. The public review/comment period was ended on March 15, 2001. SCAG's responses to the written comments were disseminated on April 2, 2001 and discussed in various forums.

Construction Emissions Analyses

Construction-related PM₁₀ Emissions

Section 93.122(d)(2) of the EPA Transportation Conformity Rule requires that in PM₁₀ non-attainment and maintenance areas (for which the SIPs identify construction-related fugitive dust as a contributor to the area problem), the RTP should conduct the construction-related fugitive PM₁₀ emission analysis. In the SCAG region, there are five PM₁₀ non-attainment areas:

- Ø SCAB
- Ø The Coachella Valley portion of SSAB
- Ø The San Bernardino County portion (excluding Searles Valley) of the MDAB
- Ø The Searles Valley portion of MDAB
- Ø The Imperial County portion of SSAB

Of the above outlined non-attainment areas only the first three areas are subject to the Transportation Conformity Rule requirements. However, at the present time, there are no applicable PM₁₀ SIPs (construction-related fugitive dust emissions budgets) for these three areas. The U.S. Court of Appeals March 2, 1999 ruling in *EDF v. EPA* mandates that no longer submitted SIP (emissions budgets) can be used for conformity determinations.

The professional services of Sierra Research consulting firm were retained to estimate the roadway construction-related PM₁₀ emissions analysis for the related areas. (See Exhibit C-2 for the associated technical analysis.) Additionally, the following sections describe the method used in each of the submitted AQMPs/SIPs and the project-level PM₁₀ analysis currently in place regarding the roadway construction-related PM₁₀ emissions.

Submitted AQMPs / SIPs and the Associated Methods

ARB has submitted the PM₁₀ SIPs to EPA on February 1997 for SCAB and the Coachella Valley portion of SSAB; and on July 1997 for the San Bernardino County portion of MDAB. EPA has not approved any of the PM₁₀ SIPs. **Note that, in all three submitted PM₁₀ AQMPs / SIPs, the road construction-related PM₁₀ emissions are contained within the area source emission inventory not the mobile source inventory.** The following methods were used in development of each AQMP / SIP for estimating the construction-related fugitive dust emissions:

Ø SCAB and Coachella Valley Portion of SSAB:

The South Coast Air Quality Management District administers the SCAB and the Coachella Valley portion of SSAB. SCAQMD utilized the California Air Resources Board's (ARB) methodology to estimate fugitive dust emissions

resulting from all construction activities. SCAQMD used the 1993 emissions as the base year and the construction employment as a factor to estimate the growth of the construction-related PM₁₀ for the future years. The air district used SCAG's developed construction employment growth factors for its projections in the SCAB and the Coachella Valley portion of SSAB.

The South Coast Air Quality Management District has adopted Rule 403 – Fugitive Dust to reduce the amount of particulate matter entrained in the ambient air as the result of man-made fugitive dust sources in the South Coast Air Basin (SCAB). The Rule is applicable to any activity or man-made condition capable of generating fugitive dust.

SCAQMD has adopted Rule 403.1 – Wind Entrainment of Fugitive Dust to reduce and prevent the amount of fine particulate matter (PM₁₀) entrained in the ambient air by high winds action on anthropogenic (man-made) fugitive dust sources in the Coachella Valley area. The Rule is applicable to any activity or man-made condition capable of generating fugitive dust, except unpaved dust, when wind speeds exceed 25 mile per hour (mph).

Ø **San Bernardino County Portion (excluding Searles Valley) of MDAB:**

The Mojave Desert Air Quality Management District (MDAQMD) administers the San Bernardino County portion and the Riverside portion of MDAB. Road construction emissions are reflected in the MDAQMD's Final Mojave Desert Planning Area – Federal PM₁₀ Attainment Plan (dated July 31, 1995).

MDAQMD utilized ARB's methodology (August 1997 update) to estimate fugitive dust emissions resulting from road construction activities. The uncontrolled estimation methodology is equivalent to ARB's area source methodology, with the exception of City and County road construction activity, for which the local information was used. A zero growth was assumed for construction for freeways and highways between 1998 and 2000, all road construction-related PM₁₀ emissions were based on the local and county road growth. There are no information on the road construction-related PM₁₀ beyond the year 2000.

On July 22, 1996, the MDAQMD Board adopted Rule 403.2 – Fugitive Dust Control for the Mojave Desert Planning Area to ensure that the NAAQS for PM₁₀ will not be exceeded due to anthropogenic sources of fugitive dust. The Rule is applicable to the construction / demolition activity, heavy traveled publicly maintained unpaved roads, weed suppression activity, limestone processing activity, and activities on Bureau of Land Management (BML) land.

SCAG's Method for Estimating PM₁₀ Construction-related Emissions

In absence of the applicable SIPs (construction-related fugitive dust emissions budgets), SCAG used the ARB methodology as reflected in the Section 7.8 - Road Construction Dust (Updated August 1997) and the new roadway projects (lane

miles) incorporated into the 2001 RTP to estimate the respective fugitive dust (PM₁₀) for the analysis years for SCAB, the Coachella portion of SSAB, and the San Bernardino County portion of MDAB. See Exhibit C-1 for ARB's Road Construction Dust.

SCAG retained the professional services of Sierra Research (consulting firm) to complete this task. The employed methodology was agreed on through an interagency consultation. See Exhibit C-2 for the associated technical analyses.

The estimated emissions are reflected in the following tables:

PM₁₀ Construction-related Emissions Tables

SCAB (tons per day)

2006	2010	2020	2025
2.90	2.90	2.03	0.72

Coachella Valley (SSAB - tons per day)

2005	2010	2020	2025
0.059	0.059	0.066	0.00

San Bernardino County (MDAB – excluding Searles Valley Area)

2005	2010	2020	2025
0.534	0.534	1.036	0.096

Project-level PM₁₀ Analysis

Under the federal regulations, those transportation projects located in a federally designated PM₁₀ non-attainment or maintenance areas should be analyzed for the project-level PM₁₀ conformity. Additionally, the roadway and transit-way projects subject to the National Environmental Policy Act (NEPA) requirements should address the PM₁₀ through the Environmental Impact Study (EIS) process.

In California, all projects, regionally significant projects, are subject to compliance with the State CEQA (California Environmental Quality Act) requirements through the Environmental Impact Report (EIR), including the emission analysis for PM₁₀.

Unpaved Road

The emission reduction benefits from reducing unpaved roads were included in the PM₁₀ regional emissions analysis for conformity finding of the San Bernardino County portion of MDAB and the Coachella Valley portion of SSAB. In general, the unpaved road forecast is on a downward trend. The professional services of

Sierra Research consulting firm were retained to estimate the unpaved road PM10 emissions for the above said areas. (See Exhibit C-2 for the associated technical analysis.)

The unpaved road emissions analysis was benefited from contribution of the following agencies: the Riverside County Transportation Commission (RCTC), Coachella Valley Associated Governments (CVAG), South Coast Air Quality Management District (SCAQMD), San Bernardino Associated Governments (SANBAG), Mojave Desert Air Quality Management District (MDAQMD), Caltrans, and California Air Resources Board (ARB).

III. MODELING SUMMARY

2001 Regional Transportation Plan Modeling Summary for Regional Emission Analysis

BACKGROUND

The Southern California Association of Governments (SCAG) is the primary agency for the development and maintenance of travel forecasting methods for the SCAG region. SCAG has been developing and improving these travel forecasting methods since 1967. The current Regional Transportation Modeling System has been calibrated and validated using a 1991 Origin and Destination home interview survey and the 1990 Census. The model has undergone significant changes since the last Regional Transportation Plan (98RTP) and the validated model is described in the 1997 Model Validation & Summary of the Regional Transportation Model, published in June 2000.

SCAG's Regional Transportation Model consists of a four-step process: trip generation, trip distribution, mode choice, and trip assignment. The SCAG model utilizes the TRANPLAN transportation planning software and executes on several IBM model 43P computers which are located at SCAG.

For the 2001 Regional Transportation Plan (2001RTP) Conformity analysis, an iteration process was used in which the congested time from the initial peak period (AM Peak) and the initial off-peak period (mid-day) assignments were used to develop new skim tables (congested times). The congested skims are input to the trip distribution models and mode split models.

To perform the emissions analysis as required under the August 15, 1997 EPA's Transportation Conformity Rule, emissions comparisons were made on eight networks included 1997, 2000 and six future year scenarios:

- 1) Year 1997
- 2) Year 2000
- 3) Year 2010 "Baseline"
- 4) Year 2010 "Plan"
- 5) Year 2020 "Baseline"
- 6) Year 2020 "Plan"
- 7) Year 2025 "Baseline"
- 8) Year 2025 "Plan"

The 1997 "Model Validation Year" and the 2000 "Base Year" scenarios represent all those projects operational during the spring of the years.

Under Transportation Conformity Rule, there are two types of the regional emission tests for conformity findings: with the SIP emission budget (cited in section 93.11) and without the SIP emission budget (cited in section 93.119). The regional emission tests without the SIP - motor vehicle, emissions budgets, are based on the comparing two scenarios: the baseline (no-build) scenario with the action (build) scenario.

EPA's Transportation Conformity Rule defines the "Baseline" scenario as the future transportation system that will result from current programs, including:

1. All in-place regionally significant highway and transit facilities, services and activities
2. All ongoing travel demand management (TDM) or transportation system management (TSM) activities
3. Completion of all regionally significant projects, regardless of funding source, which are currently under construction, or undergoing right-of-way acquisition; come from the first year of the previously conforming regional transportation plan (RTP) or transportation improvement program (TIP); or have completed the National Environmental Policy Act (NEPA) process.

Under Transportation Conformity Rule, the "Action" scenario, also known as "Build" or "Plan", must include the following:

1. All facilities, services, and activities in the "Baseline" scenario
2. Completion of all transportation control measures (TCMs) and regionally significant projects (including facilities, services, and activities) specifically identified in the proposed RTP which will be operational or in effect in the analysis year, except regulatory TCMs may not be assumed to begin at a future time unless the regulation is already adopted by the enforcing jurisdiction or the TCM is identified in the applicable SIP
3. All TDM programs and TSM activities known to the MPO, but not included in the applicable SIP or utilizing any Federal funding or approval, which have been fully adopted and/or funded by the enforcing jurisdiction or sponsoring agency since the last conformity determination
4. The incremental effects of any TDM programs and TSM activities known to the MPO, but not included in the applicable SIP or utilizing any Federal funding or approval, which were adopted and/or funded prior to the date of the last conformity determination, but which have been modified since then to be more stringent or effective

5. Completion of all expected regionally significant highway and transit projects which are not from a conforming RTP and TIP
6. Completion of all expected regionally significant non-FHWA/FTA highway and transit projects that have clear funding sources and commitments leading toward their implementation and completion by the analysis year

MODEL IMPROVEMENTS

The regional travel demand model has undergone many changes since the last RTP (1998 RTP) and the new model has been validated for 1997, which is the base year for the 2001 RTP. Some of the features are listed below:

- ≠ New zone system. Total number of zones has been increased from 2069 to 3217. The internal zones (3191) are now contiguous for the entire modeling area. The 4-step modeling process (trip generation, trip distribution, mode split, and trip assignment) is now conducted for the total modeling area.
- ≠ New highway networks. Developed from the Thomas Brothers GIS data base. Includes freeways coded as 1-way links, freeway access/egress ramps, and freeway to freeway connectors (mixed flow and HOV where applicable).
- ≠ New transit networks. Integrated with the new highway networks. Number of transit modes increased from 5 to 13. Number of non-transit modes increased from 3 to 7.
- ≠ New trip generation models. Increase the number of trip purposes from 5 to 13. There are 6 categories of Home-Work (HW) trips: (1) Direct HW – Low income, (2) Direct HW – Medium income, (3) Direct HW – High income, (4) Strategic HW – Low income, (5) Strategic HW – Medium income, and (6) Strategic HW – High Income. “Direct” HW trips go directly between home and work. “Strategic” HW trips include an intermediate stop between home and work.
- ≠ New Mode Choice models. There are five separate mode choice models: (1) Home-based Work, (2) Home-based School, (3) Home-based Other, (4) Work-Other, and (5) Other-Other. The Home-Based Work, Home-Based School, and Other-Based Other models are nested logit models. The other two are multinomial logit models. Each model is applied for both the peak and off-peak periods. The travel modes outputs from the models are (1) auto modes (drive alone, 2-person carpool (driver plus one passenger), 3-or-more person carpool (driver plus 2 or more passengers)), (2) transit (local bus, express bus, rail), (3) school bus, (4) non-motorized (walking or bicycling).
- ≠ New Heavy Duty Truck model - The heavy duty truck (HDT) model consists of two major components: 1) internal truck trip development, and 2) external truck trip development. The internal truck trips are generated using a cross classification method by applying truck trip rates

for a SIC code by the number of employees in that category. The daily truck trip ends are distributed using a gravity model to create daily truck trips in an O-D format for three truck types:

- ## (1) light HDT, (2) medium HDT, and (3) heavy HDT. The external truck trips are developed using an econometric model using commodity flow data to estimate INBOUND flow and OUTBOUND flow by counties. The county to county commodity data is allocated to zonal level data based on SIC employee distribution, then converted to trucks using observed data collected during model development by consultants. Two special truck generators 1) sea port related, and air port related truck trips were initially included as part of the heavy duty truck model developed by the consultants. For the 2001RTP Final modeling, only the sea port trucks are part of the heavy duty truck model, the air port related truck trips are now replaced by air cargo truck trips developed by the Regional Airport Demand and Allocation Model (RADAM). The total daily truck trips are allocated to the four time periods by three truck types: (1) Light HDT, (2) Medium HDT, and (3) Heavy HDT as purposes 7, 8, 9, which will merge with the others in trip assignment. For further information on the heavy-duty truck model refer to the report "Heavy Duty Truck Model and VMT Estimation", published October, 1999.
- ## New airport passenger trips. Airport passenger trips were modeled using the RADAM model, developed and maintained by consultants. The RADAM generated passenger trips are developed for two trip purposes: 1) business, and 2) non-business. The model uses a RADAM zone system which total about 100 zones. These trips at the RADAM zones are disaggregated to TAZ based on SIC employment data for business trips, and household and income data for non-business trips. The daily passenger trips are converted to the four time period vehicle trips for three modes: (1) drive alone, (2) 2-person vehicles, and (3) 3-or-more person vehicles. The airport vehicle trips are merged with the other regional model vehicle trips as purposes 4, 5, and 6.
- ## New airport air cargo trips. Air cargo trucks were modeled using the RADAM model, developed and maintained by consultants. The RADAM generated air cargo truck trips developed at the RADAM zones are disaggregated to the TAZ based on SIC employment data. The daily air cargo trips are converted to the three truck types: 1) Light HDT, 2) Medium HDT, and 3) Heavy HDT for the four time periods. The air cargo trips are merged with the HDT truck tables developed using the HDT modeling process described above.
- ## New highway assignment. Nine trip purposes (modes) (1) drive alone, (2) 2-person vehicles, (3) 3-or-more person vehicles, (4) airport passenger drive-alone, (5) airport passenger 2-person vehicles, (6) airport passenger 3-or-more person vehicles, (7) Light-HDT, (8) Medium-HDT, and (9) Heavy-HDT are assigned simultaneously. During this process, trucks are converted to PCE for each link based on: (1) percentage of trucks, (2) percentage of grade, (3) length of the link, and (4) level of congestion (V/C ratios).

REGIONAL TRAVEL DEMAND MODEL ASSUMPTIONS

The Final 2001 RTP model assumptions applied to the model runs are consistent with those used in the 1997 base year model validation runs. Some additional assumptions were applied to the different alternatives.

- (a) Analysis Area - The SCAG's Regional Transportation Modeling area has been expanded to include Victor Valley (north to Barstow), Coachella Valley, and Morongo Valley in the 4-step modeling process (trip generation, trip distribution, mode split, and trip assignment). For transportation analysis purposes, the area is divided into 3191 transportation analysis zones (TAZ's) with an additional 26 external cordon stations.
- (b) Socio Economic Data - The most recent socioeconomic data, March, 2001 version, is used for the Final 2001 RTP and its conformity analysis. The population in the SCAG region is expected to grow 40 percent from 1997 to 2025 and employment is projected to grow about 43 percent during the same period. TABLE 1 and TABLE 2 show the population and employment summaries by counties and air basin for 1997, 2000, 2010, 2020, and 2025. For the Final RTP, the 2010, 2020, and 2025 Baseline SED data (shown in table 1 and 2) were modified to reflect the allocation of the airport growth adopted in the Plan (not shown). The airport growth allocation was recommended by the Regional Airport Task Force and adopted by the Regional Council for inclusion in the 2001 RTP.

TABLE 1. SUMMARY OF TOTAL POPULATION DATA – Baseline

COUNTY/REGION	1997	2000	2010	2020	2025
LOS ANGELES	9,532,336	9,791,658	10,777,728	11,751,812	12,330,979
ORANGE	2,700,460	2,859,771	3,162,059	3,334,622	3,406,823
RIVERSIDE	1,367,244	1,499,271	1,963,769	2,439,704	2,729,136
SAN BERNARDINO	1,587,559	1,714,928	1,998,338	2,439,694	2,725,907
VENTURA	725,734	739,570	835,903	914,649	950,741
TOTAL 5-COUNTY	15,913,333	16,605,198	18,737,797	20,880,481	22,143,586
MODELING AREA*					
SCCAB	725,734	739,570	835,903	914,649	950,741
MDAB	658,478	742,937	978,297	1,335,801	1,528,467
SCAB	14,203,996	14,768,541	16,467,410	18,061,989	19,029,630
SSAB	325,125	354,150	456,187	568,042	634,748
TOTAL 5-COUNTY	15,913,333	16,605,198	18,737,797	20,880,481	22,143,586
MODELING AREA*					
IMPERIAL	141,596	157,094	212,463	278,483	317,733

Source: SCAG, 2001RTP Final Growth Forecast, March 17, 2001

* Total shown is for the SCAG 5-county modeling area only. This includes all of Los Angeles, Orange, and Ventura Counties, and portions of Riverside and San Bernardino Counties.

TABLE 2. SUMMARY OF TOTAL EMPLOYMENT DATA – Baseline

COUNTY/REGION	1997	2000	2010	2020	2025
LOS ANGELES	4,299,018	4,422,141	4,883,564	5,149,025	5,283,810
ORANGE	1,345,136	1,501,834	1,796,050	1,974,350	2,042,913
RIVERSIDE	421,304	499,338	759,822	909,673	985,766
SAN BERNARDINO	534,080	576,345	843,235	996,777	1,074,691
VENTURA	293,850	322,147	380,637	414,281	431,369
TOTAL 5-COUNTY	6,893,388	7,321,805	8,663,308	9,444,106	9,818,549
MODELING AREA*					
SCCAB	293,850	322,147	380,637	414,281	431,369
MDAB	162,031	210,349	305,908	360,836	388,716
SCAB	6,314,129	6,643,364	7,785,680	8,451,911	8,768,219
SSAB	123,378	145,945	191,083	217,078	230,245
TOTAL 5-COUNTY	6,893,388	7,321,805	8,663,308	9,444,106	9,818,549
MODELING AREA*					
IMPERIAL	55,573	60,705	77,755	88,455	94,064

Source: SCAG, 2001RTP Final Growth Forecast, March 17-23, 2001

* Totals shown above are for the SCAG 5-county modeling area only. This includes all of Los Angeles, Orange, and Ventura Counties and portions of Riverside and San Bernardino Counties.

Networks- A summary of the transportation system attributes for the highway and transit networks for 2000 to 2025 is shown on the following page.

TABLE 3. SUMMARY OF TRANSPORTATION SYSTEM ATTRIBUTES

Year Modeled / Region	Highway Lane Miles			
S C A B	FWY/TOLL	Arterials	HOV	Total
2010 Baseline	7,841	31,017	887	39,745
2010 Plan	8,326	31,465	1,091	40,882
2020 Baseline	7,945	31,302	889	40,137
2020 Plan	8,505	31,480	1,155	41,141
2025 Baseline	8,036	31,376	1,038	40,449
2025 Plan	8,505	31,505	1,276	41,286
VCAPCD				
2010 Baseline	546.38	1,947	2	2,495
2010 Plan	576.83	1,955	2	2,533
2020 Baseline	576.83	1,955	2	2,533
2020 Plan	576.83	1,955	2	2,533
2025 Baseline	576.83	1,955	2	2,533
2025 Plan	576.83	1,955	2	2,533
Antelope, Victor, and Coachella Valley				
2010 Baseline	1,146	9,287	14	10,447
2010 Plan	1,148	9,783	23	10,955
2020 Baseline	1,148	9,621	14	10,783
2020 Plan	1,185	9,786	79	11,050
2025 Baseline	1,148	9,675	23	10,846
2025 Plan	1,185	9,783	158	11,127
Total Modeling Area				
2010 Baseline	9,534	42,250	903	52,687
2010 Plan	10,051	43,203	1,116	54,370
2020 Baseline	9,669	42,878	906	53,453
2020 Plan	10,267	43,220	1,236	54,724
2025 Baseline	9,760	43,005	1,063	53,828
2025 Plan	10,267	43,243	1,436	54,946

Transit Centerline Miles	Local Bus	Express Bus	Rail	Maglev	Total
1997	4,516	1,655	468	0	6,639
2000	4,521	1,809	478	0	6,809
2010 Baseline	4,521	1,770	559	0	6,850
2010 Plan	4,521	2,195	562	0	7,277
2020 Baseline	4,521	1,770	578	0	6,869
2020 Plan	4,521	2,195	659	96	7,709
2025 Baseline	4,521	1,770	578	0	6,869
2025 Plan	4,521	2,195	659	335	7,709

Transit Service Miles	Local Bus	Express Bus	Rail	Maglev	Total
1997	450,059	101,730	18,995	0	570,784
2000	459,795	111,658	21,704	0	593,157
2010 Baseline	472,311	111,136	54,765	0	638,212
2010 Plan	487,530	168,093	54,997	0	710,620
2020 Baseline	472,311	111,126	62,132	0	645,569
2020 Plan	487,514	168,088	64,920	50,000	874,387
2025 Baseline	472,311	111,126	62,132	0	645,569
2025 Plan	487,530	168,090	64,920	153,865	874,405

- (c) Work-at-home and Telecommuting – Home-Based-Work trips were reduced for work at home (0.62% for Baseline, 1.40% to 2.90% for Plan depending on the year) and Telecommuting (0.43% for Baseline, 0.92% to 1.81% for Plan depending on the year) in keeping with the trends observed since 1990. Trip rates used in trip generation are based on the 1991 Origin Destination survey. The table below shows the total reductions to the home based work person trips including both work at home and telecommuting.

HOME-BASED-WORK PERSON TRIP REDUCTIONS

Year Modeled	1990	1997	2000	2010BL	2010PL	2020BL	2020PL	2025BL	2025PL
Home Based Work	0	0.71	1.05	1.32	2.32	2.85	3.85	3.71	4.71

Note: Data are percent of total home-based work trips. BL = Baseline, PL = Plan

- (e) Auto Operating Cost - There are two components used in calculating auto operating cost: the cost of gasoline and "other" costs. The "other" costs category includes costs for repairs, light maintenance, lubrication, tires, and accessories. The assumption used in the modeling work is that if an auto is available at the household then the depreciation of the car and the insurance costs are already being paid for whether the car is left at home or used for commuting to work.

AUTO OPERATING COSTS

Year Modeled	1997	2000	2010BL	2010PL	2020BL	2020PL	2025BL	2025PL
Auto Operating Cost (cents/mile)	9.80	10.60	12.76	12.76	12.76	12.76	12.76	12.76

Note: Costs are expressed in 1989 dollar value for input into the mode choice models. Auto Operating costs are calculated using the following formula: Auto Operating Cost = Fuel Cost / Fuel Economy + Other Costs.

BL = Baseline, PL = Plan

- (f) Transit Fare - The transit fares are estimated based on a composite of the different fares charged for different categories and weighted appropriately.

Cash fares including the various discounts offered to students, the elderly, and the disabled,
the use of monthly passes by various categories for the initial boarding, and transferring between buses, and,
the average effective express and rail zone charge for both cash and pass users.

TABLE 4 shows the transit fares utilized in the regional model for years 1997, 2000, 2010, 2020, and 2025. This assumes no real cost increase in transit fares from 1997 to 2025.

TABLE 4. TRANSIT FARES (IN 1997 DOLLAR VALUE)

FARE TYPE	MTA	OCTA	OTHERS
Base Fare (Cents)	73.9	72.0	72.0
Line Haul (Cents per Mile)	6.8	6.8	6.8
Transfer (Cents)	29.5	6.0	6.0

- (g) Rule 2202 - The effectiveness of Rule 2202 in SCAB was not estimated in travel demand and congestion but was credited for the emission budget analysis.
- (h) Jitneys and Vanpool - The Plan for all years are assumed that one percent of the Drive alone vehicles will shift to vanpools and jitneys. Eighty percent of the one percent are allocated to vans (assumes 12 persons/van) and the remaining 20 percent are assumed to be taking jitneys.

Smart Shuttles – The Plan for all years are also assumed one and one-half percent of the drive-alone home-based work trip, and one percent of the other drive-alone trips in Los Angeles County will divert to transit trips to reflect Los Angeles County Metropolitan Transportation Commissions' Long Range Transit Plan.

- (i) Capacity and Free Flow Speed - The highway capacities (including Heavy Duty Vehicle) used in the model for each of the facility types vary, depending on area location (i.e., CBD, urban, suburban, rural, or mountain). Free flow speeds generally are posted speeds.

Highway Capacities and Free Flow Speeds Used in the Model

	Vehicles/lane/hour	Free Flow Speed, mph (mean)
Freeway (MF, HOV)	2100	60 - 70 (64.1)
Principal Arterial	500 - 850	20 - 60 (35.6)
Minor Arterial	450 - 800	21 - 55 (32.9)
Major Collector	400 - 750	20 - 55 (33.6)

- (j) Toll Roads - The effect of the toll charges on the toll roads was incorporated into the highway assignment. The cost of the toll was added to each toll facility by inserting the cost to the appropriate links and identifying the link with a unique Toll Class number. The toll cost (in dollars) converts to a time value (in minutes).

MAXIMUM TOLL COSTS APPLIED

Corridor	Peak Period	Off Peak Period
SR91 (1996 dollars)	\$2.75	\$0.82
SJHTC	\$0.15/mile	\$0.075/mile
FTC	\$0.15/mile	\$0.075/mile
ETC	\$0.15/mile	\$0.075/mile

- (k) ITS - The practical capacities on freeways and major arterials were not increased to reflect the improved traffic flow due to the ATT/IVHS.
- (l) Highway Assignments - Vehicle trip assignment results in representative traffic volumes and average speeds on each link of the AM peak (6:00 am - 9:00 am), PM peak (3:00 pm - 7:00 pm), Midday (9:00 am - 3:00 pm) and Night (7:00 pm - 6:00 am) periods. For each time period, SCAG utilizes the equilibrium assignment algorithm logic to take into account congestion by employing a capacity-restrained iterative assignment process. The heavy duty trucks are converted to PCE during this assignment process.

This equilibrium assignment technique adjusts link time for each iteration based on the volume to capacity ratio using the Bureau of Public Road (BPR) formula as shown below:

$$T = T_o (1 + 0.15 (V/C')^{** 4})$$

where,

T = estimated link time at volume V

T_o = link time at free flow speed

V = assigned link volume

C' = practical capacity (75% of possible capacity)

(m) TABLE 5 shows the summaries of vehicle miles traveled (VMT) in 1000 miles by air districts.

TABLE 5. VMT (000) SUMMARY

	YEAR 2010 BASELINE			YEAR 2010 PLAN		
	L & MDV	HDV	TOTAL	L & MDV	HDV	TOTAL
Los Angeles	192,845	14,605	207,450	188,601	14,616	203,217
Orange	71,523	3,660	75,182	71,003	3,632	74,635
Riverside	37,858	4,204	42,062	37,946	4,260	42,206
San Bernardino	32,304	3,508	35,813	32,318	3,495	35,813
-----	-----	-----	-----	-----	-----	-----
SCAB TOTAL	334,530	25,977	360,507	329,868	26,004	355,872
Ventura	16,693	850	17,543	16,603	853	17,456
Antelope Valley	9,531	504	10,035	9,457	501	9,958
Victor Valley Area	14,772	1,545	16,318	14,613	1,531	16,144
Coachella Valley	11,451	1,278	12,729	11,403	1,270	12,673
=====	=====	=====	=====	=====	=====	=====
Modeling Area	386,976	30,155	417,131	381,943	30,159	412,102

	YEAR 2020 BASELINE			YEAR 2020 PLAN		
	L & MDV	HDV	TOTAL	L & MDV	HDV	TOTAL
Los Angeles	216,476	16,457	232,933	207,087	16,359	223,447
Orange	80,179	4,089	84,268	79,204	4,041	83,245
Riverside	45,117	5,127	50,244	44,990	5,244	50,234
San Bernardino	38,084	4,316	42,401	38,144	4,341	42,485
-----	-----	-----	-----	-----	-----	-----
SCAB TOTAL	379,856	29,990	409,846	369,425	29,985	399,410
Ventura	19,156	934	20,091	18,965	944	19,909
Antelope Valley	13,846	621	14,467	13,511	643	14,154
Victor Valley Area	19,165	1,995	21,160	18,971	1,988	20,959
Coachella Valley	13,523	1,561	15,084	13,374	1,542	14,916
=====	=====	=====	=====	=====	=====	=====
Modeling Area	445,547	35,100	480,647	434,246	35,103	469,350

	YEAR 2025 BASELINE			YEAR 2025 PLAN		
	L & MDV	HDV	TOTAL	L & MDV	HDV	TOTAL
Los Angeles	223,232	17,581	240,813	212,400	17,415	229,815
Orange	82,616	4,295	86,911	81,396	4,243	85,638
Riverside	48,213	5,619	53,832	48,031	5,735	53,766
San Bernardino	40,686	4,757	45,443	40,784	4,770	45,554
-----	-----	-----	-----	-----	-----	-----
SCAB TOTAL	394,747	32,252	426,999	382,611	32,163	414,774
Ventura	19,988	973	20,961	19,714	986	20,699
Antelope Valley	15,829	675	16,504	15,256	709	15,965
Victor Valley Area	20,631	2,250	22,881	20,270	2,247	22,517
Coachella Valley	14,684	1,694	16,378	14,448	1,673	16,121
=====	=====	=====	=====	=====	=====	=====
Modeling Area	465,878	37,845	503,723	452,299	37,778	490,076

(n) Convergence Process: For each year modeled and each scenario of that modeled year, a standard 3-loop process is employed on the base scenario to obtain a convergence estimate of travel impedance. This process is as following:

The trip distribution model was run once with the “observed speeds” coded on the input highway network. This was done to calculate the initial zone-to-zone travel times.

The trip tables for each highway modes were assigned to the highway network. This process produced the “first fit “pass highway assignments and yielded model-estimated congested speeds for the highway network.

The congested speeds were then fed back into the trip distribution model

The trip distribution, mode choice, and highway assignment phases were then rerun resulting in a more refined set of congested speeds for the highway network. An averaging process was utilized to smooth the variation between the first pass or first loop of the trip assignment and the second pass of the trip assignment phase.

For each scenario of that model year, additional three loops are applied. This process yields a typical VMT convergence of within one half of one percent.

(o) Emission Analysis: Mobile source emissions are determined using the State developed mobile source emission estimation method. The method involves the application of two models: the emission factors model and the Direct Travel Impact Model (DTIM). The California Air Resources Board (ARB) maintains the EMFAC model that is used to calculate the emission factors for individual vehicle types and fleets of vehicles. These factors are a function of several variables including fleet age distribution, vehicle engine temperature, ambient temperature, fleet mix, and vehicle speed. The DTIM developed by Caltrans is used to calculate amounts of air pollutant emitted from motor vehicles and fuel consumption. The emission factors (7F and 7G) assumed 10% ZEV for year 2010, year 2020 and year 2025.

The California Air Resources Board's (ARB) emission inventory model, BURDEN, is used for the emission budget analysis for Ventura county of SCCAB and MDAB. BURDEN provides air-basin level emissions estimates.

FUTURE MODEL IMPROVEMENTS

Although significant improvements have been incorporated into the models used for the 2001 RTP modeling, SCAG plans to continually refine the Regional Travel Demand model. Listed below are some of the major projects:

- ≠ Year 2000 Post Census Travel Survey: The current SCAG model was developed based on the 1991 O-D Survey. Since then, there is now an urban rail system, a commuter rail system and extensive HOV system added to the transportation infrastructure. To measure the change in travel behavior, approximately 28,000 households will be surveyed. Results from that survey will be used to improve the current regional travel demand model.
- ≠ New Cordon Survey: With the extension of the regional modeling area, many cordon stations have been relocated. This survey will be used to update the cordon model. The last cordon survey was taken in 1967.
- ≠ Phase 2 Highway Inventory: This is the second phase of an extensive highway inventory program initiated last year to collect data on the arterial system such as number of lanes, posted speed limits, number of traffic signals, etc. for the current and future years.
- ≠ Parking Cost Model: SCAG completed a Parking Cost Survey in February, 2001. Results from the survey will be used to develop a parking cost model.
- ≠ New Regional Air Passenger and Cargo Allocation Model: SCAG will develop airport passenger and air cargo models to be incorporated into the regional travel demand model to be maintained in-house.
- ≠ Truck Count Survey: SCAG will use the result of the Truck Count Survey to refine the Heavy Duty Truck model.
- ≠ Refine the HDT External model based on the new 2000 Commodity Flow data.

2001 RTP REGIONAL EMISSION ANALYSIS

For the past two years, many have been involved in development of the 2001 Regional Transportation Plan (RTP) in consultation with all federal, state, regional, local transportation and air agencies and transit operators in this region. SCAG's Transportation Conformity Working Group and Modeling Task Force meetings have facilitated the required interagency consultation in various steps of the 2001 RTP process.

SCAG's 2001 RTP is consistent with the most recent estimate of mobile source emissions. The conformity analysis is based on the most recent population, employment, travel, and congestion estimates prepared by SCAG as the Metropolitan Planning Organization.

SCAG's 2001 RTP provides for timely implementation of the Transportation Control Measures (TCMs). TCMs in the 2001 RTP include, but not limited to telecommute, commute and non-commuter trip reductions, regional and inter-city transit, smart shuttles, High Occupancy Vehicle (HOV) lanes, traffic signal improvements for freeway and highway capacity enhancements, intersections improvements, and ITS.

The Interim Guidance requires a quantitative analysis of the emissions impact of transportation plans and programs where such techniques are available. SCAG used the Regional Transportation Modeling System which includes the TRANPLAN based demand model, the Direct Travel Impact Model (DTIM) and BURDEN to estimate CO, NO_x, ROG and PM₁₀.

The AP-42 (5th edition) equation is used for the Paved Road Dust

$$e = k (sL / 2)^{0.65} (W / 3)^{1.5},$$

where e = emission factor in g/VMT

$k = 7.3$ g/VMT

$sL = 0.037$ g/m² (High), 0.24 g/m² (Low), 0.02 g/m² (Free way)

W = Average Weight in tons

There are no applicable SIPs (construction-related fugitive dust emissions budgets) for the PM₁₀ areas. To estimate the PM₁₀ construction-related Dust, SCAG used the ARB methodology as reflected in the Section 7.8 – Road Construction Dust (Updated August 1997) for SCAB, Coachella Valley (SSAB), and the San Bernardino County portion of MDAB.

The road paving emission reduction estimates were prepared in accordance with Section 7.9 (Estimated Paved Road Dust) and Section 7.10 (Road Dust Unpaved Roads) procedures specified in ARB's Methods for Assessing Area Source Emissions in California for Coachella Valley (SSAB), and the San Bernardino County portion of MDAB (See Exhibit C1 and C2 for the related emissions analysis).

The following table reflects the required regional emission tests for the 2001 RTP. With the exception of the Imperial County and Searles Valley, all ozone and NO₂ non-attainment areas are subject to emission budget tests. And the rest, all PM₁₀ and CO non-attainment areas and the Imperial County (ozone non-attainment area) are subject to the plan / baseline (P/B) tests.

REQUIRED REGIONAL EMISSION TESTS FOR 2001 RTP

<u>AREA</u>	<u>OZONE</u>	<u>CO</u>	<u>PM10</u>	<u>NO2</u>
SCAB ¹ Budgets	97 SIP Budgets (00-02-05-08-10-20-25)	P/B (00-10-20-25)	P/B (00-06-10-20-25)	97 Maintenance Plan (00-10-20-25)
Ventura County	94 SIP Budgets (00-02-05-10-20-25)	----	----	----
Antelope Valley	94 SIP Budgets ³	----	----	----
San Bernardino ²	aggregated budgets	----	P/B (00-10-20-25)	----
Coachella Valley	(00-02-05-07-10-20-25)	----	P/B (00-10-20-25)	----
Searles Valley ⁴	----	----	P/B (00-10-20-25)	----
Imperial County	P/B (00-10-20-25)	----	P/B (00-10-20-25)	----

Note : P/B (Plan/Baseline), Years in parentheses are milestone years

Note 1: Excluding the Banning Pass area for federal non-attainment area

Note 2: Excluding the Searles Valley Area

Note 3: The aggregated emission budgets established in the 1994 Ozone SIPs for Antelope Valley, the portion of San Bernardino County and the Coachella Valley

Note 4: As the results of the U.S. Court of Appeals March 2, 1999 ruling, the conformity findings have been suspended.

SOUTH COAST AIR BASIN (SCAB) EMISSION ANALYSIS

Emissions in tons, Fuel in 1000-gallons, VMT in 1000-miles
Excluding the Banning Pass area for the federal ozone, PM10, CO and NO2 analyses

SUMMER	ROG	NOx	CO	FUEL
2000	342.193	553.709	2,943.188	16,534
2010 RTP	144.189	364.611	1,661.108	17,294
2010 Baseline	147.949	361.431	1,685.010	17,515
2020 RTP	93.218	347.178	1,440.516	19,294
2020 Baseline	99.607	347.473	1,515.721	19,794
2025 RTP	87.920	353.346	1,458.897	19,990
2025 Baseline	96.070	355.763	1,565.298	20,576
WINTER	ROG	NOx	CO	FUEL
2000	380.784	583.190	3,557.499	16,534
2010 RTP	148.288	379.908	1,851.297	17,294
2010 Baseline	152.410	376.768	1,881.336	17,515
2020 RTP	90.146	359.935	1,510.013	19,294
2020 Baseline	96.472	360.496	1,587.993	19,794
2025 RTP	84.118	366.046	1,515.616	19,990
2025 Baseline	92.065	368.846	1,623.353	20,576

Note : Emissions (ROG, NOx, CO, and Fuel) are base on DTIM2/7G which is consist with 1997 SCAQMP

OZONE

The emission budgets established in the 1997 Ozone SIP (1-hour standard) as the applicable emissions budgets for conformity analysis and year 2010 is the Ozone attainment year for SCAB. DTIM2/7G model runs were used for the calculation of emissions.

<u>OXIDES OF NITROGEN (NO_x)</u>		<u>REACTIVE ORGANIC GAS (ROG)</u>			2020	2025
2010	2020	2025	2010	2010		
2001 RTP PLAN	144.189	93.218	87.920	364.611	347.178	353.346
<u>Emissions</u>						
LDA	85.590	45.352	40.004	164.604	120.591	117.192
LDT	28.145	17.601	16.705	101.828	96.612	97.365
MDT	7.072	5.215	4.924	13.139	12.163	12.038
BUS	0.722	0.838	0.879	12.774	12.511	12.746
HDG	4.907	3.818	3.693	1.825	12.163	12.038
HDD	13.712	15.831	16.881	67.521	90.009	98.781
MCY	4.041	4.563	4.836	2.920	3.128	3.186
-----	-----	-----	-----	-----	-----	-----
Total	144.189	93.218	87.920	364.611	347.178	353.346

Total Control Factors*

LDA	0.411	0.411	0.411	0.281	0.281	0.281
LDT	0.411	0.411	0.411	0.281	0.281	0.281
MDT	0.460	0.460	0.460	0.404	0.404	0.404
BUS	0.690	0.690	0.690	0.421	0.421	0.421
HDG	0.416	0.416	0.416	0.223	0.223	0.223
HDD	0.690	0.690	0.690	0.421	0.421	0.421
MCY	0.465	0.465	0.465	0.199	0.199	0.199

Control Measures Credit

LDA	35.177	18.640	16.442	46.254	33.886	32.931
LDT	11.568	7.234	6.866	28.614	27.148	27.360
MDT	3.253	2.399	2.265	5.308	4.914	4.863
BUS	0.498	0.578	0.607	5.378	5.267	5.366
HDG	2.041	1.588	1.536	0.407	2.712	2.684
HDD	9.461	10.923	11.648	28.426	37.894	41.587
MCY	1.879	2.122	2.249	0.581	0.622	0.634
-----	-----	-----	-----	-----	-----	-----
Total	63.878	43.484	41.612	114.968	112.444	115.425

Adjusted Emission	80.311	49.734	46.308	249.643	234.734	237.921
Emission Budget	80.733	80.733	80.733	277.766	277.766	277.766
(RTP – Budget)	- 0.422	- 30.999	- 34.425	- 28.123	- 43.032	- 39.845

Note : * Control Factors for Ozone SIP Measures - the ARB August 18, 2000 release new control factors were utilized for calculation of the regional emissions.

PARTICULATE MATTER LESS THAN 10 MICRONS (PM10)

YEAR	L&MDV Exhaust / Tire / Brake Wear	HDV	Road Dust	Construction	Total PM10
2000	4.151	4.328	182.239	----	190.718
2010 RTP	8.919	6.769	211.762	2.90	230.350
2010 Baseline	9.041	6.758	216.512	----	232.311
2020 RTP	9.852	7.260	245.344	2.03	264.486
2020 Baseline	10.122	7.254	254.892	----	272.268
2025 RTP	10.197	7.858	258.055	0.72	276.830
2025 Baseline	10.514	7.877	269.424	----	287.815

Note : Emission factors for Exhaust / Tire / Brake Wear are based on DTIM3/7G1c
Road Dust are based on AP-42 (5th edition)
See Exhibit C-2 for PM10 construction-related fugitive dust emissions

<u>ROG</u>	<u>1990</u>	<u>2000</u>	<u>2006</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
Summer	832.83	336.91	221.28	144.19	93.22	87.92
<u>Winter</u>	<u>904.22</u>	<u>374.26</u>	<u>238.68</u>	<u>148.29</u>	<u>90.15</u>	<u>84.12</u>
Annual	861.38	351.85	228.24	145.83	91.99	86.40
<u>NOx</u>	<u>1990</u>	<u>2000</u>	<u>2006</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
Summer	868.49	553.71	440.25	364.61	347.18	353.35
<u>Winter</u>	<u>921.59</u>	<u>583.19</u>	<u>461.22</u>	<u>379.91</u>	<u>359.94</u>	<u>366.05</u>
Annual	889.73	565.50	448.64	370.73	352.28	358.43

Conformity finding requirement : the ROG and Nox emissions for the future years must be less than 1990 emission level.
Note (1) : DTIM2 / 7G

VENTURA COUNTY (SCCAB) EMISSION ANALYSIS

DTIM1/7F - Emissions in tons, Fuel in 1000-gallons, VMT in 1000-miles

OZONE

		<u>ROG</u>	<u>NOx</u>
2025	DTIM (2025-Plan 5/8/01)	5.06	23.96
	Control Measure Credit	-1.86	-10.54
	Net Emission	3.20	13.42
	Budget	9.82	21.33
2020	DTIM (2020-Plan 5/8/01)	7.70	24.83
	Control Measure Credit	-2.84	-10.92
	Net Emission	4.86	13.91
	Budget	9.82	21.33
2010	DTIM (2010-Plan 5/8/01)	8.94	23.83
	Control Measure Credit	-2.90	-10.36
	Net Emission	6.04	13.47
	Budget	9.82	21.33
2005	Estimated ¹	12.28	25.28
	Control Measure Credit	-2.63	- 6.15
	Net Emission	9.65	19.13
	Budget	9.82	21.33
2002	Estimated ¹	14.28	26.16
	Control Measure Credit	-2.70	- 3.38
	Net Emission	11.58	22.78
	Budget	12.47	24.36
1999	Estimated ²	16.53	26.45
	Control Measure Credit	- 1.97	- 2.06
	Net Emission	14.56	24.39
	Budget	16.20	27.04

Notes: 1. Estimated by interpolation between DTIM runs for Year 2000 and 2010-Plan.
2. Estimated by interpolation between DTIM runs for Year 1997 and 2000.

MDAB/SSAB EMISSION ANALYSIS

Antelope Valley, Victor Valley Area, and Coachella Valley

DTIM1/7F - Emissions in tons, Fuel in 1000-gallons, VMT in 1000-miles

OZONE

		<u>ROG</u>	<u>NOx</u>
2025	DTIM (2025-Plan 5/8/01)	10.97	66.31
	Control Measure Credit	-3.13	-25.65
	Net Emission	7.84	40.66
	Budget	23.31	54.82
2020	DTIM (2020-Plan 5/8/01)	15.08	66.59
	Control Measure Credit	-4.38	-25.75
	Net Emission	10.70	40.84
	Budget	23.31	54.82
2010	DTIM (2010-Plan 5/8/01)	15.58	55.47
	Control Measure Credit	-4.01	-21.28
	Net Emission	11.57	34.19
	Budget	23.31	54.82
2007	Estimated ¹	17.95	53.60
	Control Measure Credit	-3.75	- 15.88
	Net Emission	14.20	37.72
	Budget	23.31	54.82
2005	Estimated ¹	19.53	52.36
	Control Measure Credit	-3.33	- 12.16
	Net Emission	16.20	40.20
	Budget	26.45	57.06
2002	Estimated ¹	21.90	50.49
	Control Measure Credit	-3.13	- 5.25
	Net Emission	18.77	45.24
	Budget	31.07	65.79
2000	DTIM (2000-12/7/00)	23.48	49.24
	Control Measure Credit	- 2.85	- 2.86
	Net Emission	20.63	46.37
	Budget	36.25	70.03
1999	Estimated ²	26.43	50.31
	Control Measure Credit	-2.57	- 2.63
	Net Emission	23.86	47.69
	Budget	36.25	70.03

Notes: 1. Estimated by interpolation between DTIM runs for Year 2000 and 2010-Plan.

2. Estimated by interpolation between DTIM runs for Year 1997 and 2000.

VICTOR VALLEY AREA

(San Bernardino County portion of MDAB excluding Searles Valley area)

PARTICULATE MATTER LESS THAN 10 MICRONS (PM₁₀)

YEAR	Exhaust / Tire / Brake		Road Dust	Construction	Unpaved	Total PM10
	L&MDV	HDV				
2000	0.395	0.497	11.177	----	----	12.069
2005 RTP	0.395	0.448	13.146	0.534	----	14.523
2005 Baseline	0.398	0.450	13.239	----	1.510	15.597
2010 RTP	0.395	0.399	15.114	0.534	----	16.442
2010 Baseline	0.400	0.403	15.301	----	1.067	17.171
2020 RTP	0.507	0.482	19.458	1.036	----	21.483
2020 Baseline	0.512	0.484	20.005	----	0.639	21.640
2025 RTP	0.541	0.550	21.177	0.096	----	22.364
2025 Baseline	0.551	0.550	21.951	----	0.533	23.585

Note : Emission factors for Exhaust / Tire / Brake Wear are based on DTIM3/7G1c
Road Dust are based on AP-42 (5th edition)

COACHELLA VALLEY

Including the Banning Pass area

PARTICULATE MATTER LESS THAN 10 MICRONS (PM₁₀)

YEAR	Exhaust / Tire / Brake		Road Dust	Construction	Unpaved	Total PM10
	L&MDV	HDV				
2000	0.307	0.397	7.500	----	----	8.204
2005 RTP	0.308	0.364	9.075	0.059	----	9.805
2005 Baseline	0.308	0.365	9.113	----	0.394	10.180
2010 RTP	0.308	0.331	10.649	0.059	----	11.347
2010 Baseline	0.309	0.333	10.726	----	0.394	11.762
2020 RTP	0.356	0.373	15.186	0.066	----	15.981
2020 Baseline	0.360	0.378	15.404	----	0.394	16.536
2025 RTP	0.385	0.409	16.670	0.000	----	17.464
2025 Baseline	0.391	0.414	16.973	----	0.394	18.172

Note : Emission factors for Exhaust / Tire / Brake Wear are based on DTIM3/7G1c
Road Dust are based on AP-42 (5th edition)

IMPERIAL COUNTY EMISSION ANALYSIS

The Imperial County portion of the Salton Sea Air basin is designated by the Environmental Protection Agency (EPA) as a non-attainment area for particulate matter less than 10 microns in size (PM10) and for transitional ozone.

There is no Ozone Air Quality Management Plan (AQMP - no emission budgets and no control measures) for Imperial County. The Imperial Valley PM10 SIP was submitted to the Environmental Protection Agency (EPA) by ARB and pending EPA's action. Emissions from the on-road mobile sources are in significant and the submitted PM10 SIP does not have emission budgets for the on-road mobile sources.

The SCAG Regional Transportation Model does not cover Imperial County. Therefore a simpler method is utilized to produce the associated technical data and information.

The conformity tests are based on Plan/Baseline tests of regional emissions caused by the proposed transportation plan.

The following tables show Vehicle miles traveled (VMT) and results of emissions for year 2000, 2010, 2020, and 2025.

YEAR	TOG	CO	NOx	FUEL	EVAP	ROG
2000	5.493	69.491	7.592	0.236	3.467	8.060
2010 Plan	1.849	48.536	5.004	0.307	2.494	4.028
2010 Baseline	1.889	49.496	5.047	0.312	2.548	4.115
2020 Plan	1.023	52.122	5.130	0.405	2.214	3.066
2020 Baseline	1.046	53.155	5.161	0.411	2.286	3.156
2025 Plan	0.936	53.811	5.165	0.426	2.381	3.163
2025 Baseline	0.967	55.513	5.229	0.435	2.505	3.312

Note: DTIM3/7G1c - Emissions in tons, Fuel in 1000-gallons, Light and Medium Duty Vehicles

YEAR	<u>LIGHT & MEDIUM</u>			<u>HEAVY DUTY VEHICLE</u>			<u>TOTAL VEHICLE</u>		
	VMT	ROG	NOx	VMT	ROG	NOx	VMT	ROG	NOx
2000	4,879	8.060	7.592	845	0.624	9.219	5,723	8.684	16.811
2010 Plan	6,774	4.028	5.004	1,114	0.836	9.640	7,888	4.864	14.644
2010 Baseline	6,884	4.115	5.047	1,132	0.850	9.796	8,016	4.965	14.843
2020 Plan	8,975	3.066	5.130	1,408	0.972	11.633	10,383	4.038	16.763
2020 Baseline	9,095	3.156	5.161	1,427	0.986	11.792	10,522	4.142	16.953
2025 Plan	10,027	3.163	5.165	1,573	1.102	12.748	11,600	4.265	17.913
2025 Baseline	10,227	3.312	5.229	1,604	1.124	12.999	11,832	4.436	18.228

Note : Emission Factors (ROG and Nox) for Heavy Duty Vehicles are based on BURDEN/7G1c
DTIM3/7G1c - Emissions in tons, Fuel in 1000-gallons, VMT in 1000-miles

The paved Road Dust emission factors for each road type are computed based on EPA's AP-42 (5th Edition).

Emission factors for Tire Wear, Brake Wear, and Exhaust are based on DTIM3/7G1c

A summary of the VMT and the Particulate Matter less than 10 microns (PM10) for Imperial County is shown on the following table.

YEAR	<u>VEHICLE MILES TRAVELED</u>			ROAD DUST	<u>EXHA/TW/BW</u>		PM10 TOTAL
	L&MDV	HDV	TOTAL		L&MDV	HDV	
2000	4,878,636	844,776	5,723,412	6.558	0.142	0.379	7.079
2010 Plan	6,774,019	1,113,753	7,887,772	8.883	0.184	0.291	9.358
2010 Baseline	6,884,226	1,131,873	8,016,099	9.311	0.187	0.296	9.794
2020 Plan	8,975,359	1,407,981	10,383,339	11.335	0.242	0.341	11.918
2020 Baseline	9,095,249	1,426,788	10,522,038	12.476	0.244	0.346	13.066
2025 Plan	10,027,437	1,573,022	11,600,460	12.907	0.270	0.383	13.560
2025 Baseline	10,227,284	1,604,373	11,831,657	14.271	0.276	0.391	14.938

SUMMARY OF EMISSION ANALYSIS (2001 RTP)

(Emissions in tons/day)

SOUTH COAST AIR BASIN (SCAB)

OZONE – SUMMER

ROG	<u>2002</u>	<u>2005</u>	<u>2008</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
BUDGET	273.103	206.034	145.354	80.733	80.733	80.733
2001 RTP	269.499	201.738	143.900	80.311	49.734	46.308
NOx	<u>2002</u>	<u>2005</u>	<u>2008</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
BUDGET	447.119	369.122	310.078	277.766	277.766	277.766
2001 RTP	446.257	360.172	284.059	249.643	234.734	237.921

Conformity finding requirement: the ROG and NOx emissions must be equal or less than emission budgets

NITROGEN DIOXIDE (NO2) - WINTER

Nox	<u>1994</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
BUDGET	657.30	657.30	657.30	657.30	657.30
2001 RTP	--	--	379.91	359.94	366.05

Conformity finding requirement: the NOx emissions must be equal or less than emission budgets

CARBON MONOXIDE (CO) – WINTER

CO	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2025</u>
Plan	---	---	1,851.30	1,510.01	1,515.62
Baseline	7,380.76	3464.84	1,881.34	1,587.99	1,623.35

Conformity finding requirement: the Plan scenario's emission must less than the Baseline scenario's emission.

PARTICULATE MATTER LESS THAN 10 MICRONS

ROG	1990	2000	2006	2010	2020	2025
Annual	861.38	351.85	228.24	145.83	91.99	86.40
NOx	1990	2000	2006	2010	2020	2025
Annual	889.73	565.50	448.64	370.73	352.28	358.43

Conformity finding requirement: the ROG and NOx emissions for the future years must be less than 1990 emission level.

PM	2000	2006	2010	2020	2025
Plan	---	215.526	230.350	264.486	276.830
Baseline	190.718	215.674	232.311	272.268	287.815

Conformity finding requirement: the Plan scenario's emission must less than the Baseline scenario's emission. The roadway construction-related PM₁₀ emissions were incorporated into the regional emissions analysis.

SOUTH CENTRAL COAST AIR BASIN (SCCAB) - VENTURA COUNTY

OZONE – SUMMER

ROG	1999	2002	2005	2010	2020	2025
BUDGET	16.20	12.47	9.82	9.82	9.82	9.82
2001 RTP	--	11.58	9.65	6.04	4.86	3.20
NOx	1999	2002	2005	2010	2020	2025
BUDGET	27.04	24.36	21.33	21.33	21.33	21.33
2001 RTP	--	22.78	19.13	13.47	13.91	13.42

Conformity finding requirement: the ROG and NOx emissions must be equal or less than emission budgets.

MOJAVE DESERT (MDAB) and SALTON SEA AIR BASINS (SSAB)
(Antelope Valley, San Bernardino County in MDAB, and Coachella Valley in SSAB)

OZONE – SUMMER

ROG	2002	2005	2007	2010	2020	2025
BUDGET	31.07	26.45	23.31	23.31	23.31	23.31
2001 RTIP	18.77	16.20	14.20	11.57	10.70	7.84
NOx	2002	2005	2007	2010	2020	2025
BUDGET	65.79	57.06	54.82	54.82	54.82	54.82
2001 RTP	45.24	40.20	37.72	34.19	40.84	40.66

Conformity finding requirement: the ROG and NOx emissions must be equal or less than emission budgets

PM10 – SAN BERNARDINO COUNTY EXCLUDING SEARLES VALLEY (MDAB)

PM10	2005	2010	2020	2025
Plan	14.523	16.442	21.483	22.364
Baseline	15.597	17.171	21.640	23.585

Conformity finding requirement: the Plan scenario's emission must be less than the Baseline scenario's emission. The roadway construction-related PM₁₀ emissions were incorporated into the regional emissions analysis.

PM10 – SEARLES VALLEY (MDAB)

PM10	2000	2010	2020	2025
Plan	---	0.173	0.262	0.330
Baseline	---	0.173	0.262	0.330

Conformity finding requirement: the Plan scenario's emission must less than the Baseline scenario's emission.

PM10 – COACHELLA VALLEY (SSAB)

PM10	2005	2010	2020	2025
Plan	9.805	11.347	15.981	17.464
Baseline	10.180	11.762	16.536	18.172

Conformity finding requirement: the Plan scenario's emission must be less than the Baseline scenario's emission. The roadway construction-related PM₁₀ emissions were incorporated into the regional emissions analysis.

SALTON SEA AIR BASIN (SSAB) - IMPERIAL COUNTY

OZONE – SUMMER

ROG	2000	2010	2020	2025
Plan	---	4.864	4.038	4.265
Baseline	---	4.965	4.142	4.436

NO_x	2000	2010	2020	2025
Plan	---	14.644	16.763	17.913
Baseline	---	14.843	16.953	18.228

Conformity finding requirement: the Plan scenario's emission must less than the Baseline scenario's emission.

PARTICULATE MATTER LESS THAN 10 MICRONS

PM₁₀	2000	2010	2020	2025
Plan	---	9.358	11.918	13.560
Baseline	---	9.794	13.066	14.938

Conformity finding requirement: the Plan scenario's emission must less than the Baseline scenario's emission.

IV. TIMELY IMPLEMENTATION OF TCMs

Introduction

This report itemizes the findings of the timely implementation of Transportation Control Measures (TCM) for the 2001 RTP Update. The findings are required only for the applicable TCMs contained in the approved State Implementation Plans (SIP).

The air basins in the SCAG region are: the South Coast Air Basin (SCAB), the Mojave Desert Air Basin (MDAB), the Salton Sea Air Basin (SSAB), and the Ventura County portion of the South Central Coast Air Basin (VC/SCCAB). These air basins are administered by five air districts; the South Coast Air Quality Management District (SCAQMD), the Antelope Valley Air Pollution Control District (AVAPCD), the Mojave Desert Air Quality Management District (MDAQMD), the Imperial County Air Pollution Control District (ICAPCD) and the Ventura County Air Pollution Control District (VCAPCD).

For details on the federal non-attainment areas and its associated criteria pollutants, see Section II of this volume.

The criteria and procedures utilized for the determination of TCMs are cited on the EPA Transportation Conformity Rule and explained in the following sections.

EPA Transportation Conformity Rule Requirements

The requirement for timely implementation of TCMs are defined in the EPA Transportation Conformity Rule - 40 CFR Parts 51 and 93 (August 15, 1997):

§93.113 Criteria and procedures: Timely Implementation of TCMs

- (c) *For TIPs, this criterion is satisfied if the following conditions are met:*
 - (1) *An examination of the specific steps and funding sources(s) needed to fully implement each TCM indicates that TCMs which are eligible for funding under title 23 U.S.C. or the Federal Transit Laws are on or ahead of the schedule established in the applicable implementation plan, or, if such TCMs are behind the schedule established in the applicable implementation plan, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome, and that all State and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding of TCMs over other projects within their control, including projects in locations outside the nonattainment or maintenance area.*
 - (2) *If TCMs in the applicable implementation plan have previously been programmed for Federal funding but the funds have not been obligated and the TCMs are behind the schedule in the implementation plan, then the TIP cannot be found to conform if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than*

- projects which are eligible for Federal funding intended for air quality improvement projects, e.g. the congestion Mitigation and Air Quality Improvement Program.*
- (3) *Nothing in the TIP may interfere with the implementation of any TCM in the applicable implementation plan.*

§ 93.101 Definitions

Transportation Control Measure (TCM) is any measure that is specifically identified and committed to in the applicable SIP/AQMP. The TCM is either one of the types listed in section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow of congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of this report.

Applicable SIPs

Two of the applicable SIPs in the SCAG region, developed for the SCAB and the VC/SCCAB, contain TCMs and are subject to EPA's Transportation Conformity Rule analyses. The other SIPs do not contain any TCMs. The two SIPs with applicable TCMs are:

1997 Ozone SIP (SCAB)

The 1997 Ozone SIP is the applicable one for this reporting in the SCAB. On April 10, 2000, the EPA approved the 1997 Ozone SIP and its TCM1 categories. The 1994 Ozone SIP/AQMP was the prior applicable SIP and the TCM1 categories in both documents are consistent. Since last reporting on the 1998 RTP and associated Regional Transportation Improvement Programs (RTIPs), there was one TCM replacement that is described below:

TCM Replacement in SCAB

On November 3, 1998, the Los Angeles County voters voted against a local sales tax for further development of the subway. Two segments of the Metro Redline were affected due to lack of funding:

- Ø Metro Redline Eastside Extension
A 3-mile segment with 4 stations [from Union Station (in downtown LA) to First St./ Lorena Ave.]
- Ø Metro Redline West-side Extension
A 2.3 mile segment with 2 stations [from Western Station to Pico Boulevard / San Vicente Blvd.].

The Redline Extension projects are located in SCAB. The rail transit was categorically considered as the TCM1 in the 1994 Ozone Air Quality Management Plan (AQMP)/SIP.

The emission reduction benefits from these rail projects were replaced with the rapid bus projects/ corridors. In compliance with the federal requirements, the new TCM projects must reduce equal or more emissions, be implemented in the time frame established for the rail projects, and be financially constrained. The new TCM projects/bus transit corridors are:

- Ø Pico/East First Rapid Bus
This is a 12.4-mile route with 24 buses and 17 stations.
- Ø Ventura Rapid Bus
This is a 16.1-mile route with 16 buses and 14 stations.

1994 Ozone SIP (VC/SCCAB)

The 1994 Ozone SIP and its TCM strategies function for reporting on the timely implementation of TCMs.

Note: Timely Implementation of TCMs for the 2001 RTP Update is consistent with the 2000 RTIP. The 2000 RTIP was approved by the federal agencies on October 6, 2000.

Timely Implementation of TCMs in SCAB

Finding

SCAG has determined that the 2001 RTP Update provides for the timely implementation of TCMs in the applicable SIP within SCAB. All TCM1 project categories are given funding priority and are on schedule.

Methodology

Applicable Documents

In the EPA Transportation Conformity Rule, the requirements state, "timely implementation" is to be measured against the TCMs in the "applicable" SIP. The 1997 SIP/AQMP functions as the applicable SIP for SCAB. The TCM1 categories in the 1997 Ozone SIP are consistent with the 1994 SIP (prior applicable SIP). See Exhibit D.

Assessment of Timely Implementation

SCAG evaluated the TCM1 projects to determine the anticipated level of implementation. The target date specified in the first two fiscal years of TCM projects in the respective RTIP (FY 98/99 and 99/00). The list of TCM1 projects will "roll forward" and the enforceable commitment will automatically be revised to encompass the first two-year schedule of TCM1 projects contained in

each RTIP. These findings were reflected in the 2000/01 – 05/06 RTIP, which was approved by the federal agencies on October 6, 2000.

Actions that Demonstrate Timely Implementation

The implementation of the TCMs is being achieved through the concerted efforts of regional federal, state, and local agencies. The Timely Implementation of TCMs for the 2001 RTP Update is consistent with the 2000 RTIP. The following types of actions contribute to the program:

The TEA-21 Programs provide the federal source to fund the eligible TCM projects under the EPA federal requirements.

TCMs are eligible expenditures under funds provided for the National Highway System (NHS), the Congestion Mitigation and Air Quality Program (CMAQ), and the Surface Transportation Program (STP). TCMs listed in Section 108(f)(1)(A) (other than clauses xii and xvi) of the Federal Clean Air Act (CAA) are specifically listed as eligible uses for federal funding (see Exhibit E for Section 108 (t)(1)(A) of the CAA).

Under CMAQ, funds are targeted for TCMs and may not be used for projects that do not contribute to the attainment of a National Ambient Air Quality Standard (NAAQS). CMAQ funds may not be provided for a project resulting in the construction of new capacity available to single occupant vehicles, unless the project consists of a high occupancy vehicle facility available to single occupant vehicles only at other than peak travel times.

The financially constrained projects in the 1998 and 2000 RTIPs implement the TCM in the applicable SIP/AQMP, as required by EPA's Transportation Conformity Rule. The 2000 RTIP is incorporated into the Draft 2001 RTP Update.

Description

TCM1 in the 1997 SIP/AQMP replaces all previous TCMs in the prior SIPs. TCM1 includes three categories of transportation improvement:

- Ø High occupancy vehicle improvements
- Ø Transit/system management
- Ø Information services

This measure does not include transportation projects and programs that are exclusively implemented by local funds. The enforceable commitment for TCM measures is to fund and implement the first two years of the six-year RTIP.

High Occupancy Vehicle (HOV) Improvements

Capital improvements, which reduce emissions, include HOV Projects and related pricing alternatives and park and ride lots/intermodal facilities.

Transit/System Management

Managing the system as follows improves congestion and reduces emissions:

- Ø Bus, rail and shuttle transit improvements;
- Ø Bicycle and pedestrian facilities;
- Ø Urban Freeway System Management improvements;
- Ø Smart Corridors System Management programs;
- Ø Railroad consolidation programs such as the Alameda Corridor;
- Ø Congestion Management Plan-based demand management strategies;
- Ø County/corridor-wide vanpool programs;
- Ø Telecommunication facilities/satellite work centers;
- Ø Seed money for transportation management associations; and
- Ø TDM demonstration programs/projects eligible for programming in the RTIP.

Information Services

By targeting individuals who travel to and from employment sites and other activity centers (e.g. airports, schools, shopping centers, and special event centers) and providing them with information specifically tailored to facilitate use of alternate travel modes, vehicle travel and the associated emissions can be significantly reduced. Providing information services offers an innovative way of reducing vehicle emissions when combined with facility improvements, service enhancements, product development, extensive education, marketing, and promotion.

Potential actions to reduce congestion and emissions through individual efforts include:

- Ø Promoting multi-modal strategies to maximize all options available to commuters;

- Ø Targeting peak period trips for reduction;
- Ø Marketing and promoting the use of HOV lanes to the general public;
- Ø Marketing and promoting rail lines to the general public;
- Ø Educating the public regarding cost, locations, accessibility, and services available at park and ride lots;
- Ø Promote and market vanpool formation and incentive programs promoting ridematching through the Internet and other means of making alternative travel option information more accessible to the general public.

Enforceable Commitment

Federally funded projects and programs are the basis for an enforceable commitment for this TCM. During conformity analysis, all projects and programs receiving federal, state, and/or partially local funding must be considered in the determination of conformity and consistency with the emission budget contained in the applicable SIP. These components of the Transportation Improvements TCM would contribute to emission reductions as stated in the applicable SIP. The enforceable commitment is for the first two years of TCM1 projects in the 1998 and 2000 RTIPs.

Methodology

For the reporting of the Timely Implementation of TCMs for the 2001 RTP Update, the projects in the 1998 and 2000 RTIPs were used. The RTIPs contain field codes that classify the types of projects proposed. The list of qualifying TCM1 field codes is shown in this section. Based on these codes, all projects of a certain code qualifying as a TCM1 project were reviewed for funding priority.

Project implementation remains an enforceable commitment by project sponsor agencies. For delayed projects, there are explanations that do not jeopardize the finding of timely implementation.

TCM1 Projects In 1997 AQMP By Field Code	
Field Code	Description
HB4NA	ATSAC/SMART
HB4NG	MOTORIST INFORMATION SYSTEM
HB4NI	RAMP METERING & HOV BYPASS LANES
HB4NL	SIGNALS SYNCHRONIZED IMPROVEMENTS
HB4NN	TRAFFIC OPERATION CENTERS
HB4NU	CHANNELIZATION
HB5	HOV IMPROVEMENTS
HB6	RIDESHARING FACILITIES
HB6A	PARK & RIDE LOTS
HB6B	PASSENGER LOADING AREAS
HB8	BICYCLE AND PEDESTRIAN FACILITIES
HB8A	PEDESTRIAN FACILITIES ONLY
HE11C	NEW INTERCHANGES-RAMP METERING WITH HOV BYPASS LANES
HE11E	NEW OVERCROSSING - PEDESTRIAN
HE11J	WIDEN OVERCROSSING/UNDERCROSSING-RAMP METERS/HOV BYPASS LANE
HE12A	UPGRADED FACILITIES-HOV LANES
HE13A	LANE ADDITIONS - BICYCLE/PEDESTRIAN FACILITIES
HE14A	NEW FACILITY WITH HOV LANES
TEA1	BICYCLES AND PEDESTRIAN FACILITIES
TEA1A	PEDESTRIAN FACILITIES ONLY
TR1	TDM TRIP REDUCTION PROGRAM

TCM1 PROJECTS IN 1997 AQMP BY FIELD CODE	
FIELD CODE	DESCRIPTION
TR2I	TRANSIT - INTERMODAL FACILITIES
TR5V	PARATRANSIT - VEHICLES (GAS/DIESEL)
TR5VA	PARATRANSIT - VEHICLES (ALTERNATIVE FUEL)
TR5V1	PARATRANSIT - VEHICLES (EXPANSION: GAS/DIESEL)
TR5V1A	PARATRANSIT - VEHICLES (EXPANSION: ALTERNATIVE FUEL)
TR5V2	PARATRANSIT - VEHICLES (REHABILITATE: GAS/DIESEL)
TR5V2A	PARATRANSIT - VEHICLES (REHABILITATE: ALTERNATIVE FUEL)
TR5V3	PARATRANSIT - VEHICLES (REPLACEMENT: GAS/DIESEL)
TR5V3A	PARATRANSIT - VEHICLES (REPLACEMENT: ALTERNATIVE FUEL)
TR6A	BUS SYSTEM - BUSES (GAS/DIESEL)
TR6AA	BUS SYSTEM - BUSES (ALTERNATIVE FUEL)
TR6A1	BUS SYSTEM - BUSES (EXPANSION: GAS/DIESEL)
TR6A1A	BUS SYSTEM - BUSES (EXPANSION: ALTERNATIVE FUEL)
TR6A2	BUS SYSTEM - BUSES (REHABILITATE: GAS/DIESEL)
TR6A2A	BUS SYSTEM - BUSES (REHABILITATE: ALTERNATIVE FUEL)
TR6A3	BUS SYSTEM - BUSES (REPLACEMENT: GAS/DIESEL)
TR6A3A	BUS SYSTEM - BUSES (REPLACEMENT: ALTERNATIVE FUEL)
TR6V	BUS SYSTEM - VANS (GAS/DIESEL)
TR6VA	BUS SYSTEM - VANS (ALTERNATIVE FUEL)
TR6V1	BUS SYSTEM - VANS (EXPANSION: GAS/DIESEL)
TR6V1A	BUS SYSTEM - VANS (EXPANSION: ALTERNATIVE FUEL)
TR6V2	BUS SYSTEM - VANS (REHABILITATE: GAS/DIESEL)
TR6V2A	BUS SYSTEM - VANS (REHABILITATE: ALTERNATIVE FUEL)
TR6V3	BUS SYSTEM - VANS (REPLACEMENT: GAS/DIESEL)
TR6V3A	BUS SYSTEM - VANS (REPLACEMENT: ALTERNATIVE FUEL)
TR6H1	BUS SYSTEM - PASSENGER FACILITIES (BENCHES, SHELTERS & ETC)
TR6H2	BUS SYSTEM - PASSENGER FACILITIES (LOADING AREA)
TR6H3	BUS SYSTEM - PASSENGER FACILITIES (PULL OUTS/TURN OUTS)
TR6P	BUS SYSTEM - PARK & RIDE LOTS
TR8	RAIL
TR8A	RAIL - CARS & LOCOMOTIVES
TR8A1	RAIL - CARS & LOCOMOTIVES (EXPANSION)
TR8D	RAIL - ELECTRIFICATION
TR8P	RAIL - PARK & RIDE LOTS
TR8S	RAIL - STATIONS
TR8S1	RAIL - STATIONS (IMPROVEMENTS)
TR8S2	RAIL - STATIONS (NEW)
TR9	LIGHT RAIL
TR9A	LIGHT RAIL - VEHICLES
TR9A1	LIGHT RAIL - VEHICLES (EXPANSION)
TR9D	LIGHT RAIL - ELECTRICAL
TR9E	LIGHT RAIL - EXTENSION
TR9P	LIGHT RAIL - PARK & RIDE LOT
TR9S	LIGHT RAIL - STATIONS
TR9S1	LIGHT RAIL - STATIONS (IMPROVEMENTS)
TR9S2	LIGHT RAIL - STATIONS (NEW)
TR9T	LIGHT RAIL - TRACK
TR9T1	LIGHT RAIL - TRACK (EXTENSION)

Analysis of Implementation

The implementation status of applicable TCMs (organized by county):

Los Angeles County Metropolitan Transportation Authority

PROJECT ID:	LA974170	
PROJECT DESCRIPTION:	AGOURA HILLS PARK&RIDE LOT INCREASE CAPACITY IN AGOURA HILLS AREA FROM 93 TO 193 SPACES LOCATED ON THE CONGESTED 101 FWY	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	Ongoing.	
PROJECT ID:	LA974065	
PROJECT DESCRIPTION:	AVTA BIKE RACK ON BUS PROGRAM ANTELOPE VALLEY TRANSIT AUTH. PROCURE AND INSTALL 25 SPORTWORKS BICYCLE ON AVTA BUS	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	Completed.	
PROJECT ID:	16113	
PROJECT DESCRIPTION:	ON CATALINA ISLAND FROM AVALON TO NORTH END OF ISLAND - 2 MILE BIKEWAY WITH SCENIC OVERLOOK	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA8STIP13	
PROJECT DESCRIPTION:	BURBANK LOCAL TRANSIT PURCHASE OF TWO ELETRIC BUSES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA000548	ROUTE: 10
PROJECT DESCRIPTION:	FROM PUENTE TO CITRUS- HOV LANES FROM 8 TO 10 LANES (C-ISTEA 77720) (98 RTP)	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA01347	ROUTE: 14
PROJECT DESCRIPTION:	RTE 14 FROM PEARBLOSSOM HWY TO AVE P-8 - HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA01348	ROUTE: 14
PROJECT DESCRIPTION:	RTE 14 FROM ESCONDIDO CYN RD. TO PEARBLOSSOM HWY - HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA963724	ROUTE: 30
PROJECT DESCRIPTION:	IN LA VERNE AND CLAREMONT FROM FOOTHILL BLVD. TO SAN BERNARDINO COUNTY LINE - NEW 8 LANE FWY INCLUDING 2 HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	

PROJECT ID:	126310	ROUTE: 30
PROJECT DESCRIPTION:	IN CLAREMONT FROM PADUA AVENUE TO SAN BERNARDINO COUNTY LINE – NEW 8 LANE FREEWAY INCLUDING 2 HOV LANES AND INTERCHANGE	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	12640	ROUTE: 30
PROJECT DESCRIPTION:	IN CLAREMONT FROM TOWNE AVE TO PADUA AVE - NEW 8 LANE FREEWAY INCLUDING 2 HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	17210	ROUTE: 30
PROJECT DESCRIPTION:	IN CLAREMONT FROM FOOTHILL BLVD. TO SAN BERNARDINO COUNTY LINE – NEW 8 LANE FREEWAY INCLUDING 2 HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	12570	ROUTE: 60
PROJECT DESCRIPTION:	IN AND NEAR INDUSTRY FROM 0.5 MILE WEST OF OLD BREA CANYON RD TO 0.5 MI. E. OF GRAND AVE. - HOV DIRECT CONNECTORS & COLLECTOR ROAD	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	11985	ROUTE: 405
PROJECT DESCRIPTION:	NEAR HAWTHORNE AND CULVER CITY FROM ROUTE 105 TO ROUTE 90 - 6 LANE FREEWAY ADD 2 HOV LANES	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	1178A	ROUTE: 405
PROJECT DESCRIPTION:	IN LA & CULVER CITY FROM RTE 90 to RTE 10 - HOV LANES (SB 5+0 TO 5+1; NB5+0 TO 5+1 HOV) 98CTIP \$ FUND NB LN, ALSO PAYS FOR PART OS SB \$ DELETED FROM 96STIP	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA000777	ROUTE: 405
PROJECT DESCRIPTION:	FROM ROUTE 10 TO ROUTE 101 TO EXISTING 8-10 LANE FWY ADD TWO HOV LANES (SB:4+0; 5+0 TO 5+1 HOV)	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA974042	
PROJECT DESCRIPTION:	HARBOR TRANSITWAY SHUTTLE WEEKDAYS & SAT. SVC BTW HARBOR TRANSIT STAS @ CARSON & REGION. DESTINATIONS & EMPLOYMENT CTRS	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	LA974019	
PROJECT DESCRIPTION:	CLAREMONT VILLAGE WEST TRANSIT LINKAGES CREATE A TRANSIT ORIENTED DISTRICT LINK PEDESTRIAN AND BICYCLE NETWORK	
FUNDING YEARS:	1998/99	
IMPLEMENTATION STATUS:	Completed.	

PROJECT ID:	LA71702
PROJECT DESCRIPTION:	REPLACE TWO FIXED ROUTE BUSES
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA974406
PROJECT DESCRIPTION:	MLK Jr. PARK AND RIDE EXPANSION PROJECT – PURCHASE LAND & CONSTRUCT 100 NEW PKG SPACES and PROVIDE SECURITY SURVEILLANCE
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA963754
PROJECT DESCRIPTION:	METROLINK SAN BERNARDINO LINE AT COVINA STATION - PARKING ACCESS ENHANCEMENTS (PHASE II)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA973005
PROJECT DESCRIPTION:	BUS EXPANSION: ALTERNATIVE FUEL (TROLLEY BUS)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	4U006
PROJECT DESCRIPTION:	METRO RAIL GREEN LINE AT DOUGLAS STREET STATION - SIDEWALKS AND HANDICAPPED ACCESS
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA62401
PROJECT DESCRIPTION:	REPLACE 33 BUSES (40') PER YEAR -- \$360K/BUS
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA53903
PROJECT DESCRIPTION:	REPLACEMENT BUSES: FY97=3; FY98=6; FY99=2; FY01=2; FY02=1; FY03=2.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA960111
PROJECT DESCRIPTION:	AVENUE I SIGNAL SYNCH FROM E.10TH St. EAST TO W.10 th St. - 6 SIGNALS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA960112
PROJECT DESCRIPTION:	W. 10 TH ST. SIGNAL SYNCHRONIZATION. PHASE 3 FROM AVE. O-8 TO AVE. M
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA960113
PROJECT DESCRIPTION:	AVENUE M – 10 th ST. EAST TO 10 th ST. WEST SIGNAL SYNCH
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.

PROJECT ID:	LA960114
PROJECT DESCRIPTION:	AVE. L SIGNAL SYNCH FROM 10 th ST. EAST TO 10 th ST. WEST - 4 SIGNALS.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962287
PROJECT DESCRIPTION:	SIERRA HIGHWAY INTERCONNECT PHASE I FROM AVE K TO AVE M - FIBER OPTIC INTERCONNECT PROJECT (INTERCONNECT 4 SIGNALS)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA000345
PROJECT DESCRIPTION:	LONG BEACH TRANSIT FACILITY CONSTRUCT LONG BEACH BUS FACILITY
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA64801
PROJECT DESCRIPTION:	PURCHASE (9) 40' REPLACEMENT BUSES WITH LIFTS
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA974047
PROJECT DESCRIPTION:	BRIDGE FINANCING FOR LONG BEACH BIKE STATION CONTINUATION OF OPERATION SHOWCASE BIKES AS AN ALTERNATIVE TO DRIVING
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962316
PROJECT DESCRIPTION:	SELAC-TRAFFIC SIGNAL SYNCH. CORRIDORS PROJECT SIGNAL SYNCH & BUS SPEED IMPROVEMENT PROJECT
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974243
PROJECT DESCRIPTION:	WEST SAN GABRIEL VALLEY SIGNAL SOM & BUS SPEED IMPROVEMENTS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962315
PROJECT DESCRIPTION:	POMONA VALLEY TRAFFIC SIGNAL FORUM IMPROVEMENT PROJECT REGIONALLY SIGNIFICANT IMPROVEMENT SIGNAL COORDIN./MONITOR.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	4U004
PROJECT DESCRIPTION:	IN LOS ANGELES FROM PICO STATION LOS ANGELES CONVENTION CENTER – SIDEWALKS AND PEDESTRIAN CONNECTIONS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA000487
PROJECT DESCRIPTION:	PARK AND RIDE LOT (850 SPACES) LANKERSHIM & CHANDLER-RED LINE
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.

PROJECT ID:	LA29202X
PROJECT DESCRIPTION:	METRO RED LINE MOS-3: N. HOLLYWOOD 5.9 MILES WITH 3 STATIONS HIGHLAND STA. TO N. HOLLYWOOD STA
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA29212X
PROJECT DESCRIPTION:	METRO RAIL BLUE LINE - PASADENA EXT UNION STA TO SIERRA MADRE VILLA STA - 13.5 MILES, 12 STATIONS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA79203
PROJECT DESCRIPTION:	LA STANDARD LIGHT RAIL CAR PROCUREMENT FOR GREEN AND BLUE LINES (52) POSSIBLE DEFENSE CONVERSION FUNDS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962356
PROJECT DESCRIPTION:	SOUTH BAY JPA SYNCHRONIZATION & BUS SPEED IMPROVEMENTS (TRANSIT PRIORITY SYSTEM)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA963544
PROJECT DESCRIPTION:	PURCHASE 6 ADVANCED TECHNOLOGY TRANSIT BUSES (ATTB) TO REPLACE EXISTING VEHICLES
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA9703001
PROJECT DESCRIPTION:	RIDESHARE EMPLOYER SERVICE INCLUDING RIDEGUIDE/SURVEY REGISTRATION, TDM ASSISTANCE, SPECIAL MARKETING & MONITORING
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974000
PROJECT DESCRIPTION:	BICYCLE PARKING AT FACILITIES LOCKERS AND RACKS AT 20 LOCATIONS 134 BIKE RACKS AND 54 BIKE LOCKERS
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974006
PROJECT DESCRIPTION:	UNION STA. GATEWAY BIKE STA. (BIKE RACKS/LOCKERS, BICYCLE REPAIR/ ACCESSORY SALES, SHOWERS/CHANGING FACILITIES, LIMITED FOOD SVC.)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974007
PROJECT DESCRIPTION:	REGIONAL BIKE RACKS ON BUSES INSTALL BICYCLE RACKS ON ALL 2,020 BUSES IN MTA TRANSIT FLEET
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.

PROJECT ID:	LA974036
PROJECT DESCRIPTION:	EL SEGUNDO GREEN LINE SHUTTLE OPERATES 3 PEAK HR SERVICES CONNECTING GREEN LINE W/ EMPLOYMENT DIST. (WEEKDAYS ONLY)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	R626TA
PROJECT DESCRIPTION:	METROLINK RAIL BLUE LINE - PASADENA EXT AT CHINATOWN METROLINK STATION - ACCESS IMPROVEMENTS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974165
PROJECT DESCRIPTION:	MacARTHUR PARK STA. IMPROVEMENTS for DESIGN/CONSTRUCTION OF a plaza for PUBLIC ACCESS (PED. ENTRANCES, WALKWAYS, BIKE FACILITIES)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974193
PROJECT DESCRIPTION:	TRANSIT CENTERS – DEVELOP OR EXPAND 3 TRANSIT CENTERS (IMPROVE EXISTING BUS STOP/CENTER)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	4U005
PROJECT DESCRIPTION:	METROLINK VAN NUYS STATION BETWEEN WILLIS AVENUE AND RAYNER STREET – PEDESTRIAN OVERCROSSING
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA000623
PROJECT DESCRIPTION:	TAYLOR YARD - DWP BIKEWAY EASEMENT PEDESTRIAN BRIDGE CLASS 1
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962076
PROJECT DESCRIPTION:	SAN FERNANDO RD METROLINK BIKE PATH PHASE I (1.9 MILES OF CLASS I) (1.75 MILES OF CLASS II ON SAN FERNANDO ROAD)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962098
PROJECT DESCRIPTION:	BOYLE HEIGHTS ATSAC PROJECT COMPUTER BASED REAL TIME TRAFFIC SIGNAL MONITORING SYSTEM
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962102
PROJECT DESCRIPTION:	MID-CITIES BUS SPEED IMPROVEMENTS (PEAK-HOUR ONLY)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.

PROJECT ID:	LA962104
PROJECT DESCRIPTION:	WESTSIDE BUS SPEED IMPROVEMENT PROJECT
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962106
PROJECT DESCRIPTION:	ADARIVE TRAFFIC CONTROL SYSTEM COMPUTER BASED REAL TIME TRAFFIC SIGNAL MONITORING SYSTEM
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962107
PROJECT DESCRIPTION:	SMART CORRIDOR OPERATION ENHANCEMENT
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962113
PROJECT DESCRIPTION:	CENTRAL/EAST LOS ANGELES BUS SPEED IMPROVEMENT PROJECT (INCREASES SPEED FOR FIXED-ROUTE TRANSIT BY SIGNAL PRIORITY)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962121
PROJECT DESCRIPTION:	VICTORY/VANOWEN BUS PRIORITY TREATMENTS (SIGNAL COORDIN.)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962127
PROJECT DESCRIPTION:	SYLMAR/SAN FERNANDO BUS TERMINAL AND TIMED TRANSFER CONNECTION CENTER
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962148
PROJECT DESCRIPTION:	WESTLAKE COMMUNITY BASED INTERCEPT INTERMODAL FACILITY (96 CALL, CAT 2)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962158
PROJECT DESCRIPTION:	W. VALLEY SMART SHUTTLE DEMONSTRATION PROJECT (NO SHUTTLE #)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962167
PROJECT DESCRIPTION:	BIKE RACK AND PARKING PROGRAM
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA962173
PROJECT DESCRIPTION:	WESTLAKE/MACARTHUR PARK - SMART SHUTTLE DEMONSTRATION PROJECT (NO SHUTTLE NUMBER)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.

PROJECT ID:	LA970901
PROJECT DESCRIPTION:	ATSAC & BUS PRIORITY INFRASTRUCTURE 138 SIGNALIZED INTERSECTIONS INSTALLATION
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA970902
PROJECT DESCRIPTION:	ATSAC & BUS PRIORITY INFRASTRUCTURE 42 SIGNALIZED INTERSECTIONS INSTALLATION
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA970903
PROJECT DESCRIPTION:	ATSAC & BUS PRIORITY INFRASTRUCTURE 109 SIGNALIZED INTERSECTIONS INSTALLATION
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974040
PROJECT DESCRIPTION:	METRO GREEN LINE SHUTTLE, AVIATION STATION TO CITY BUS CENTER OPERATE TWO WEEKDAY, PEAK HOUR SHUTTLE SERVICE
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974044
PROJECT DESCRIPTION:	BICYCLE RACK ON BUSES-HARBOR AREA ADD BIKE RACKS ON THE LADOT LINES WHICH EXCLUSIVELY SERVE THE HARBOR AREA
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974054
PROJECT DESCRIPTION:	KOREATOWN - METRO DASH LINK CONNECT RESID. & BUSINESS AREAS W/ 3 RED LINE STAS ALONG WILSHIRE (ALLOWS FOR SOME RTE. DEVIATION)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974058
PROJECT DESCRIPTION:	EXPOSITION PARK COMPLEX -- INSTALL APPROX. 80 BICYCLE SPACES AT 10 HIGHLY VISIBLE ENTRY LOCATIONS AT MAJOR INSTITUTIONS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974072
PROJECT DESCRIPTION:	CHATSWORTH TRANSIT STATIONS BIKE STATION INCLUDE CHANGING ROOMS, BIKE REPAIR, SALES, RENTAL SHOP, AND BIKE LOCKERS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA962148
PROJECT DESCRIPTION:	METRO RAIL RED LINE AT WESTLAKE COMMUNITY INTERMODAL INTERCEPT FACILITY - PARKING STRUCTURE (PHASE I AND II)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.

PROJECT ID:	LA962314
PROJECT DESCRIPTION:	EAST SAN GABRIEL VALLEY SOM PILOT PROJECT - TRAFFIC SIGNALS INTERCONNECT PROJECT
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA55012
PROJECT DESCRIPTION:	REPLACE BUSES - 1997 40' BUSES, 1998 5 40' BUSES, 2000 5 40' BUSES
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA55201
PROJECT DESCRIPTION:	CONTINUING PROJECT - BUS STOP IMPROVEMENTS (AMENITIES,SHELTERS)
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA55206
PROJECT DESCRIPTION:	DAR REPLACEMENT VANS; ONE NEW VAN AND ONE REPLACEMENT VAN
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974020
PROJECT DESCRIPTION:	MONTEREY PK DOWNTOWN PKG COMPLEMENT to CURRENT EFFORTS FOR IMPLEMENTATION OF A PEDEST. PLAZA W/IN THE PROJECT AREA.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA022191
PROJECT DESCRIPTION:	PASADENA - REGIONAL SIGNAL SYNCH & SMART CORRIDOR
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA974409
PROJECT DESCRIPTION:	POMONA TELEBUSINESS WORKCENTER: BRIDGING THE GAP ADD TELECONFERENCING CAPABILITIES AND INCREASE MARKETING OF CTR
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA973506
PROJECT DESCRIPTION:	ROLLING STOCK ACQUISITION UP TO 5 LOCOMOTIVES & 30 CARS
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974096
PROJECT DESCRIPTION:	SANTA CLARITA COMMUTE CONNECT OPERATION - PROPANE-FUELED EXP. BUSES TO LINK EMPLOYMENT CTRS W/ SANTA CLARITA METROLINK STA.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.

PROJECT ID:	LA003255
PROJECT DESCRIPTION:	SANTA CLARA RIVER REGIONAL COMMUTER BIKEWAY (93/94 CFP, CAT. 8, 255) CLASS 1 14.5 MILES PH.II
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA974062
PROJECT DESCRIPTION:	SANTA CLARITA BICYCLE STA. METROLINK STA. INCLUDE SECURE SPACES FOR 50 BIKES, CHANGING & REST ROOMS, BIKE REPAIR, SALES, & RENTALS
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974204
PROJECT DESCRIPTION:	NORWALK/SANTA FE SPRINGS TRANSPORTATION CTR EXPANSION, PARK-&-RIDE FOR 67 VEHICLES, KISS-AND-RIDE PASSENGER DROP OFF AREA
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	Completed.
PROJECT ID:	LA974405
PROJECT DESCRIPTION:	ARTESIA STA PED. WAY TO PROVIDE SAFE DIRECT ACCESS TO EASTBOUND PEDESTRIANS AT BLUE LINE STA. (INCLUDE SIGNALIZED PED CROSSING)
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA974032
PROJECT DESCRIPTION:	SANTA FE SPRINGS METROEXPRESS EXPAND ON THE CITY'S FIXED ROUTE CIRCULATOR TO PROVIDE FEEDER SERVICE TO THE NORWALK/SANTA FE SPRINGS METROLINK STATION
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA002047
PROJECT DESCRIPTION:	SANTA MONICA SMART CORRIDOR EXTENSION
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	LA57110
PROJECT DESCRIPTION:	BUS REPLACEMENT: FY 1997: 25 BUSES; FY1998: 31 BUSES; FY2000: 15 BUSES; FY2001: 12 BUSES; FY2002: 10 BUSES
FUNDING YEARS:	1997/98
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	927331
PROJECT DESCRIPTION:	RIDESHARE ACTIVITIES
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	Completed.

PROJECT ID:	LA996090
PROJECT DESCRIPTION:	BLUE LINE - MISSION MERIDIAN TRANSIT ORIENTED PARKING SOUTH PASADENA – WILL CONSIST OF 194 CAR PARKING GARAGE (PARK-N-RIDE), INCLUDING 134 SPACES FOR TRANSIT USERS AND 30 SPACES FOR BICYCLES ADJACENT TO STRUCTURE
FUNDING YEARS:	1999/2000
IMPLEMENTATION STATUS:	Project Initiated.
PROJECT ID:	LA974059
PROJECT DESCRIPTION:	WEST HOLLYWOOD COMMUTER CENTER TO BE LOCATED IN A HIGHLY VISIBLE STOREFRONT ALONG SANTA MONICA BLVD.
FUNDING YEARS:	1998/99
IMPLEMENTATION STATUS:	On-going.

Orange County Transportation Authority

PROJECT ID:	ORA1870
PROJECT DESCRIPTION:	PURCHASE STANDARD REPLACEMENT BUSES
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.
PROJECT ID:	ORA35
PROJECT DESCRIPTION:	TRAFFIC OPERATIONS CONTROL CENTER
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Project Completed.
PROJECT ID:	ORA55001
PROJECT DESCRIPTION:	SANTA ANA: PURCHASE AND INSTALLATION OF BICYCLE LOCKERS CITYWIDE.
FUNDING YEAR:	1997/98
IMPLEMENTATION STATUS:	Project Initiated/Ongoing (Awarded).
PROJECT ID:	ORA55229
PROJECT DESCRIPTION:	BUS STOP ACCESSIBILITY IMPROVEMENTS
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Project Initiated/Ongoing (Awarded).
PROJECT ID:	ORA55263
PROJECT DESCRIPTION:	ITS – ORANGE COUNTY MODEL DEVELOPMENT PROJECT TRAVEL TIP EXPANSION
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Project Initiated/Ongoing (Awarded).
PROJECT ID:	ORA55286
PROJECT DESCRIPTION:	BUENA PARK COMMUTER RAIL STATION
FUNDING YEAR:	1997/98
IMPLEMENTATION STATUS:	Project on Schedule for FY2000/01.
PROJECT ID:	ORA9505
PROJECT DESCRIPTION:	CITY OF SANTA ANA REGIONAL TRANSPORTATION CENTER ENGINEERING, DESIGN, CONSTRUCTION OF 423 SPACE PARKING STRUCTURE & WALKWAY
FUNDING YEAR:	1997/98
IMPLEMENTATION STATUS:	Project Completed.

PROJECT ID:	ORA9530	
PROJECT DESCRIPTION:	LA/SAN DIEGO CORRIDOR MISSION VIEJO/LAGUNA NIGUEL STATION	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Project scheduled for completion on 03/03/03. Delayed schedule due to cost adjustments and ROW issues. Additional funding has been obtained to accommodate higher construction costs and the ROW is currently being negotiated.	
PROJECT ID:	R474TB	
PROJECT DESCRIPTION:	METROLINK – RIV/LA VIA FULLERTON AT FULLERTON TRANSPORTATION CENTER – PARKING EXPANSION	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Project Completed.	
PROJECT ID:	R612TA	
PROJECT DESCRIPTION:	METROLINK – SBD/RIVERSIDE/IRVINE TUSTIN STATION - NEW STATION AND PARKING FACILITY	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	10167	ROUTE: 5
PROJECT DESCRIPTION:	BUENA PK FROM SR-91 TO LA COUNTY LINE ADD 1 HOV LANE IN EACH DIR.	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	01260FF	ROUTE: 5
PROJECT DESCRIPTION:	SANTA ANA FROM RTE 22 TO RTE 91 – 6 LANE FWY ADD 2 MIXED FLOW LANES, 2 HOV LANES, AND RECONSTRUCT INTERCHANGES INCLUDE GENE AUTRY & ORANGEWOOD	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	ORA008	ROUTE: 22
PROJECT DESCRIPTION:	IN CITY OF GARDEN GROVE EUCLID, BROOKHURST, MAGNOLIA, HARBOR, AND FAIRVIEW SIGNAL COORDINATION AT FREEWAY RAMPs	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing (Awarded).	
PROJECT ID:	550	ROUTE: 55
PROJECT DESCRIPTION:	SANTA ANA @ ALTON AVE CONSTRUCT OVERPASS & HOV ACCESS RAMPs	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	ORA55073	ROUTE: 73
PROJECT DESCRIPTION:	ROUTE 73 WIDENING FROM BIRCH STREET TO I-405 ADD ONE HOV LANE AND MIXED FLOW LN NEAR ROUTE 55 INTERCHANGE	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	1240	ROUTE: 91
PROJECT DESCRIPTION:	IN BUENA PARK & BREA FROM LA COUNTY LINE TO RTE 57 - SEGMENT 2 EXIST 8-LN FWY ADD 2 HOV LANES AND AUXILLIARY LANES	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Project Initiated/Ongoing.	
PROJECT ID:	ORA55226	ROUTE: 91

PROJECT DESCRIPTION: SR91/KRAEMER BLVD IC, MOTORIST INFORMATION SYSTEM, IM=TSM
FUNDING YEAR: 1997/98
IMPLEMENTATION STATUS: Project Completed.

Riverside County Transportation Commission

PROJECT ID: 41049
PROJECT DESCRIPTION: BELARDO RD. CORRIDOR - 1.4 Mi. BIKEWAY WITH LIGHTING & BIKE RACKS
FUNDING YEAR: 1997/98
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: 41053
PROJECT DESCRIPTION: VARIOUS LOCATIONS - CLASS I BIKEWAY AND PEDESTRIAN SIDEWALKS WITH HANDICAP RAMPS
FUNDING YEAR: 1997/98
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: 41054
PROJECT DESCRIPTION: RIVER ROAD, PEDLEY ROAD, AND SANTA ANA RIVER TRAIL – TRAFFIC SIGNAL AND TRAIL ACCESS FOR PEDESTRIAN AND EQUESTRIANS
FUNDING YEAR: 1997/98
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: RIV32134
PROJECT DESCRIPTION: IN RIVERSIDE CITY OF BEAUMONT PURCHASE TWO BUSES W/ LIFTS & TIEDOWNS (1 Replacement, 1 Expansion)
FUNDING YEAR: 1998/99
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: RIV32166
PROJECT DESCRIPTION: IN CITY OF RIVERSIDE SPECIAL SERVICES PURCHASE SIX REPLACEMENT VANS W/LIFTS AND TIEDOWNS
FUNDING YEAR: 1998/99
IMPLEMENTATION STATUS: Vans purchased.

PROJECT ID: RIV32228
PROJECT DESCRIPTION: IN WESTERN RIVERSIDE COUNTY PURCHASE 3 REPLACEMENT CNG TRANSIT COACHES, RADIOS & FAREBOXES
FUNDING YEAR: 1998/99
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: RIV520111
PROJECT DESCRIPTION: RIDESHARING
FUNDING YEAR: 1998/99
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: RIV520115
PROJECT DESCRIPTION: IN COACHELLA VALLEY AREA 2 EXPANSION 30 FOOT ELECTRIC VEHICLE (2 ELECTRIC BUS FOR SHUTTLE SERVICE)
FUNDING YEAR: 1997/98
IMPLEMENTATION STATUS: Obligated.

PROJECT ID: RIV520116
PROJECT DESCRIPTION: IN COACHELLA VALLEY AREA 5 CNG EXPANSION VANS (2 IN 97/98 & 3

FUNDING YEAR:	IN 98/99)
IMPLEMENTATION STATUS:	1998/99 Obligated.
PROJECT ID:	RIV520117
PROJECT DESCRIPTION:	IN RIVERSIDE CITY OF BANNING PURCHASE 3 REPLACEMENT 35-PASSENGER COACHES W/LIFT & TIEDOWNS (2 IN 97/98, 1 IN 00/01)
FUNDING YEAR:	1997/98
IMPLEMENTATION STATUS:	Obligated 97/98 coaches.
PROJECT ID:	RIV520134
PROJECT DESCRIPTION:	IN WESTERN RIVERSIDE COUNTY PURCHASE 6 REPLACEMENT COACHES W/LIFTS & RADIOS (2 IN 98/99, 4 IN 99/00)
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	2 coaches were purchased in 98/99; the other 4 were purchased in 99/00.
PROJECT ID:	RIV520154
PROJECT DESCRIPTION:	LUMP SUM SIGNAL SYNCHRONIZATION PROJECTS AT VARIOUS LOCATIONS
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Obligated.
PROJECT ID:	RIV520159
PROJECT DESCRIPTION:	PURCHASE ROLLING STOCK FOR EXISTING COMMUTER RAIL LINES (JOINT PROJECT WITH LACMTA – TOTAL ACQUISITION OF 14 CARS)
FUNDING YEAR:	1997/98
IMPLEMENTATION STATUS:	Obligated.
PROJECT ID:	RIV62042
PROJECT DESCRIPTION:	VALLEY-WIDE SIGNAL SYNCHRONIZATION INTERCONNECT OF 400 SIGNALS
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Funds allocated. Project estimated completion date June 2001.
PROJECT ID:	RIV62043
PROJECT DESCRIPTION:	SUNLINE METROLINK BUS PURCHASE
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Buses purchased.
PROJECT ID:	4632VFF
PROJECT DESCRIPTION:	ROUTE: 60 IN AND NEAR RIVERSIDE FROM VALLEY WAY UNDERCROSSING TO RTE 215 & ON RTE 215 FROM RTE 60 TO UNIV. AVE. UNDERCROSSING - 6 LANE FWY ADD 2 HOV LANES
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Awarded.

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PROJECT ID:	SBD31088
PROJECT DESCRIPTION:	BUS FLEET EXPANSION - PURCHASE 40' EXPANSION COACHES & AUXILLARY EQUIPMENT, CNG - 01-8, 03-1
FUNDING YEAR:	1998/99
IMPLEMENTATION STATUS:	Rollover project, on-going.
PROJECT ID:	SBD32236
PROJECT DESCRIPTION:	ONTARIO REG. TRAFFIC INFO. SYSTEM -- VARIOUS STREETS NEAR

FUNDING YEAR:	AIRPORT – FIX SIGNAGE, CHANGEABLE MESSAGE SIGNS & BOARDS	
IMPLEMENTATION STATUS:	1998/99 On-going.	
PROJECT ID:	SBD41020	
PROJECT DESCRIPTION:	PARATRANSIT VEHICLES - PURCHASE 17 PASSENGER LIFT EQUIPPED CNG REPLACEMENT VANS, 98-27	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Complete.	
PROJECT ID:	SBD41022	
PROJECT DESCRIPTION:	PARATRANSIT - VEHICLES REPLACEMENT ALT. FUEL, 03-45, 04-36	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Rollover project, on-going.	
PROJECT ID:	SBD41179	
PROJECT DESCRIPTION:	TRANSFER POINT FACILITY WITH BUS BAYS LAND ACQUISITION AND CONSTRUCTION IN DOWNTOWN SAN BERNARDINO	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Complete.	
PROJECT ID:	SBD59203	
PROJECT DESCRIPTION:	PEDESTRIAN FACILITY IMPROVEMENTS AT RIALTO METROLINK STA. BTW ORANGE & RIVERSIDE Ave. (IN ALLEY BTW METROLINK & DOWNTOWN)	
FUNDING YEAR:	2002/03	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	SBD59254	
PROJECT DESCRIPTION:	METROLINK - LOCOMOTIVE RETROFIT FOR NATURAL GAS	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Complete.	
PROJECT ID:	SBD88357	
PROJECT DESCRIPTION:	LA CADENA VALLEY BOULEVARD TO MOUNT VERNON SIGNAL INTERCONNECT	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Complete.	
PROJECT ID:	SBD94163	
PROJECT DESCRIPTION:	FUNDING FOR COMMUTER COMPUTER	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Rollover project, on-going.	
PROJECT ID:	SBD41245	ROUTE: 10
PROJECT DESCRIPTION:	PARK AND RIDE FACILITY N/O I-10 AT SPERRY AND FAIRWAY DEVELOPMENT OF 70 PARKING SPACES FOR COMMUTER VEHICLE PARKING	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	44370	ROUTE: 30
PROJECT DESCRIPTION:	NEAR FONTANA FROM 0.2 MI E OF SIERRA AVE TO LINDEN AVE CONSTRUCT 6-LANE FWY & 2 HOV LANES	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Initiated.	

PROJECT ID:	44380	ROUTE: 30
PROJECT DESCRIPTION:	IN RIALTO, 0.16 KM E/O LINDEN TO 0.16 KM W/O WILLOW AVE. CONSTRUCT 6 LANE FREEWAY & 2 HOV LANES (SEGMENT 9)	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	59101	ROUTE: 30
PROJECT DESCRIPTION:	IN RIALTO & SBD, 0.16KM W/O WILLOW AVE. TO 0.16KM W/O MACY ST. CONSTRUCT 6-LANE FREEWAY & 2 HOV LANES (SEGMENT 10)	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	711	ROUTE: 215
PROJECT DESCRIPTION:	NEAR COLTON AND SAN BERNARDINO FROM ROUTE 10 TO ROUTE 66 AT VARIOUS LOCATIONS – NORTHBOUND AND SOUTHBOUND AUXILIARY LANES WITH RIGHT OF WAY FOR FUTURE HOV LANES.	
FUNDING YEAR:	1997/98	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	713	ROUTE: 215
PROJECT DESCRIPTION:	SAN BERNARDINO, RTE 10 TO RTE 30 ADD 2 HOV LANES, MODIFY OVERCROSSING PE ONLY (INITIATED)	
FUNDING YEAR:	1998/1999	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	SBD990305	
PROJECT DESCRIPTION:	METROLINK/SAN BERNARDINO LINE CONSTRUCT A SECOND PLATFORM, PASSENGER SHELTERS AND INFORMATION KIOSKS.	
FUNDING YEAR:	1999/00	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	SBD59209	
PROJECT DESCRIPTION:	METROLINK STA., PHASE 2 SW CORNER OF MILLIKEN & AT & SF RAILROAD – EXPAND PARKING LOT FROM 330-1,000 SPACES, EXTEND SOUTH PLATFORM, ADD SHADE STRUCTURES	
FUNDING YEAR:	1999/00	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	SBD981118	
PROJECT DESCRIPTION:	BUS SYSTEM - PASSENGER FACILITIES: DESIGN AND BUILDING OF ONTARIO TRANSCENTER	
FUNDING YEAR:	2001/02	
IMPLEMENTATION STATUS:	To be implemented.	
PROJECT ID:	9908001	
PROJECT DESCRIPTION:	Running Springs – Village Trail	
FUNDING YEAR:	1998/99	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	990602	
PROJECT DESCRIPTION:	METROLINK CAPITAL MAINTENANCE	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	ON-GOING.	

PROJECT ID:	200037	
PROJECT DESCRIPTION:	4 MILE ROUTE WITHIN THE CITY OF REDLANDS – LOCAL TRANSPORTATION SERVICE UTILIZING CNG POWERED, RUBBER WHEEL TROLLEYS	
FUNDING YEAR:	1999/00	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	SBD90105	
PROJECT DESCRIPTION:	Bus system – Bus Replacements ALT. FUEL, 01-21, 02-16, 03-19, 04-13	
FUNDING YEAR:	1999/00	
IMPLEMENTATION STATUS:	On-going.	
PROJECT ID:	716	ROUTE: 215
PROJECT DESCRIPTION:	SAN BERNARDINO, 0.2 MI S/O 9TH ST TO 0.4 MI N/O 16TH ST WIDEN FWY, MODIFY INTERCHANGES CONSTRUCT COLLECTOR-DISTRIBUTOR ROAD	
FUNDING YEAR:	1999/00	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	20620	ROUTE: 30
PROJECT DESCRIPTION:	UPLAND TO SAN BERNARDINO FROM LOS ANGELES COUNTY LINE TO ROUTE 215 - 8 LANE FREEWAY INCLUDING 2 HOV LANES (R.O.W. ONLY)	
FUNDING YEAR:	1996/97	
IMPLEMENTATION STATUS:	Initiated.	
PROJECT ID:	44301	ROUTE: 30
PROJECT DESCRIPTION:	IN UPLAND, LA/SBD CO LINE TO MOUNTAIN AVE. CONSTRUCT 6 LANE FREEWAY & 2 HOV LANES (SEGMENT 1)	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	Under construction.	
PROJECT ID:	44311	ROUTE: 30
PROJECT DESCRIPTION:	IN UPLAND, MOUNTAIN AVE. TO 0.1 MILE W/O CUCAMONGA CANYON WASH CONSTRUCT 6 LANE FWY & 2 HOV LANES & CAMPUS AVE. UC (SEGMENT 2)	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	Under construction.	
PROJECT ID:	44321	ROUTE: 30
PROJECT DESCRIPTION:	IN RANCHO CUCAMONGA, 0.1 MILE W/O CUCAMONGA CANYON WASH TO HERMOSA AV CONSTRUCT 6 LANE FREEWAY & 2 HOV LANES (SEGMENT 3)	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	Under construction.	
PROJECT ID:	44331	ROUTE: 30
PROJECT DESCRIPTION:	IN RANCHO CUCAMONGA, HERMOSA AVE TO 0.6 KM E/O MILLIKEN AVE. CONSTRUCT 6 LANE FREEWAY & 2 HOV LANES (SEGMENT 4)	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	Under construction.	
PROJECT ID:	44400	ROUTE: 30
PROJECT DESCRIPTION:	RTE 30 - 0.1 MILE W/O MACY ST TO 'H' ST. RTE 215 - 0.1 MILE S/O MUSCUIABE DR. TO UNIVERSITY PKWY (SEGMENT 11/PHASE 1)	
FUNDING YEAR:	2000/01	
IMPLEMENTATION STATUS:	Initiated.	

PROJECT ID:	200056
PROJECT DESCRIPTION:	GREEN VALLEY LAKE - AREA IMPROVEMENTS ROADWAY SHOULDER FOR PAVED WALKWAY, STRUCTURAL REHAB., DIRT TRAIL IMPROVEMENTS
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	To be implemented.
PROJECT ID:	980901
PROJECT DESCRIPTION:	ROUTE: 30 ON SR 30 FROM LA CO. LINE TO .5 MILES EAST OF ETIWANDA AVE. CONSTRUCT 12 OVERCROSSINGS & UNDERCROSSINGS FOR SEGS. 1-5
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	Initiated.
PROJECT ID:	200068
PROJECT DESCRIPTION:	UPGRADE AND SYNCHRONIZE TRAFFIC SIGNALS ON PARALLEL/ INTERSECTING ARTERIALS ALONG I-10 AND SR-60 FREEWAY CORRIDORS
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	Initiated.
PROJECT ID:	200062
PROJECT DESCRIPTION:	40TH ST FROM KENDALL DR TO SEPULVEDA AV – SIGNAL INTERCONNECT A TOTAL OF 6 TRAFFIC SIGNALS
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	To be implemented.
PROJECT ID:	200077
PROJECT DESCRIPTION:	BUS SYSTEM – PURCHASE EXPANSION ALT FUEL BUSES (01-13), (02-14)
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	On-going.
PROJECT ID:	200072
PROJECT DESCRIPTION:	GRAND AVE., PEYTON DRIVE, CHINO AVENUE AND CHINO HILLS PARKWAY – TRAFFIC SIGNAL SYNCHRONIZATION AND TRAFFIC OPERATION CENTER
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	To be implemented.
PROJECT ID:	200073
PROJECT DESCRIPTION:	ANDERSON ST./TIPPECANOE FROM UNIVERSITY COURT TO HOSPITALITY LANE – PROVIDE TRAFFIC SIGNAL COORDINATION AND TIMING INTERCONNECT 7 TRAFFIC SIGNALS, INSTALL EMERG. PRE-EMPTION
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	To be implemented.
PROJECT ID:	200074
PROJECT DESCRIPTION:	LUMP SUM – TRANSPORTATION ENHANCEMENT ACTIVITIES PROJECTS FOR SAN BERNARDINO COUNTY-BIKE/PED PROJECTS
FUNDING YEAR:	2000/01
IMPLEMENTATION STATUS:	To be implemented.
PROJECT ID:	SBD41065
PROJECT DESCRIPTION:	PARATRANSIT-VEHICLES: REPLACEMENT ALT. FUEL, 99-1, 00-4, 02-1
FUNDING YEAR:	2001/02
IMPLEMENTATION STATUS:	On-going.

Timely Implementation of TCMs in the Ventura County Portion of the SCCAB

Ventura County is expeditiously implementing transportation control measure (TCM) strategies contained in the 1994 Ozone SIP. The county continues to implement these TCMs through the CMAQ, the STP, and other federal transportation and transit programs.

Finding

SCAG has determined that the 2001 RTIP provides for the timely implementation of TCMs in the applicable 1994 Ozone SIP developed for the Ventura County portion of the SCCAB.

Background

On January 8, 1997, the EPA approved the 1994 SIP developed for the Ventura County portion of the SCCAB.

In late 1996, the VCAPCD repealed Rule 210, Employee Commute Options (ECO), in response to the California Health and Safety Code, Section 40929. The revision to section 40929 took effect in January 1996, which prohibited air districts from implementing mandatory ECO programs without a federal mandate. The repeal of Rule 210 was authorized by a 1995 amendment to the Federal Clean Air Act.

Because of these changes, the ECO transportation control measures (TCM G) was withdrawn from the applicable SIP. However, a voluntary emission reduction program (VMEP), VCAPCD Rule 211, was adopted by the District's Board and submitted to EPA. Rule 211, the Transportation Outreach Program, requires Ventura County employers to register with VCAPCD and submit a biennial commute survey. The Transportation Outreach Program staff works with employers to encourage ridesharing and trip reduction strategies for employees.

Since the withdrawal of TCM G – ECO, there remains five strategies in the 1994 applicable SIP. The remaining strategies are TCM A – Ridesharing, TCM B – Non-motorized strategies, TCM C – Traffic Flow Management, TCM D – Land Use, and TCM E – Transit. These strategies do not claim emission reduction benefits. The TCM strategies have been included in the SIP to assist transportation and air quality agencies identify projects that have the potential of reducing vehicle emissions and vehicle miles traveled.

The withdrawal of TCM G did not jeopardize the timely implementation of TCMs under the Transportation Conformity Rule. Section 93.113(b)(1) of the Transportation Conformity Rule states that a finding of timely implementation of TCMs can be made only for TCMs funded under title 23 U.S.C. or the Federal Transit Laws. Therefore,

TCMs from other sources do not require a finding of timely implementation. Rule 210, TCM G, was not eligible for funding under title 23 U.S.C. or the Federal Transit Laws.

Analysis

The development of the CMAQ, STP and Transportation Enhancement Activity (TEA) programs for Ventura County was the result of a countywide priority-setting process, which was carried out over several months. A number of discussions were held with the Ventura County Transportation Commission (VCTC). For CMAQ, the VCTC Board reviewed and ultimately adopted the following program priorities for CMAQ funding based on the 1994 SIP/AQMP:

- Ø Clean Fuel Bus Fleets & Support Facilities
- Ø Improved Public Transit
- Ø Bicycle & Pedestrian Facilities
- Ø Traffic Flow Improvements

VCTC also included in its screening criteria for CMAQ funds a requirement that the project/program be an adopted TCM. The most recent STP and CMAQ projects were adopted by VCTC in April 2000.

For TEA funds, in 1998 California Transportation Commission (CTC) voted to allocate 75% of California's TEA funds to counties by formula to be programmed based on local priorities. Accordingly, VCTC has programmed TEA funds under a regional prioritization process performed simultaneously with the STP and CMAQ processes.

Under State law VCTC is responsible for prioritizing Ventura County's share of the 75% Regional Improvement Program (RIP) in the STIP. VCTC programs these projects based on a priority list established through the Regional Transportation Plan and Congestion Management Program, in consultation with California Department of Transportation (Caltrans), SCAG, and the county's local jurisdictions. Three of these projects provide traffic flow improvements through the improvement of freeway interchanges, and each of these projects will receive federal funds. Therefore, these projects are included on the TCM list.

The TCM project listing for each of the adopted strategies is attached. Excluded from the lists are projects reported as completed in the last RTIP. The following is a brief discussion of the projects and programs funded within the TCM categories.

A total of \$121,274,000 of the federal funds has been invested in the TCM projects.

Clean Fuel Bus Fleets and Support Facilities

The highest priority for CMAQ funds in Ventura County was for capital projects to increase the use of clean fuels for transit.

The 1991 AQMP, which was developed to respond to the California Clean Air Act requirements, included the TCM F Clean Fuels (methanol, compressed natural gas [CNG], liquefied petroleum gas [LPG], and electricity). The 1994 AQMP and later AQMPs no longer include clean fuels as a TCM. However, the clean-fuel projects listed under this category also support TCM E, transit strategies.

The status of projects from the Clean-Fuel Bus program is as follows:

- Ø Two alternative-fueled trolley-type buses for Ojai – one bus has been purchased, the second is out to bid.
- Ø Three CNG buses for Thousand Oaks – programmed for FY 2001/02.
- Ø Four CNG buses for Simi Valley – completed in FY 1998/99.
- Ø Simi Valley CNG Fueling Facility – project completed.
- Ø Five CNG buses for Simi Valley – completed.
- Ø All other projects are being implemented.

The total federal funding for these projects was \$4,486,000, representing 4% of the total federal funds for TCMs.

Improved Public Transit

The second priority for CMAQ funds has continued to be improvements to public transit. Transit improvements support the TCM E Transit Strategy.

The following is the status of projects from the Improved Public Transit program:

- Ø Oxnard/Warner Center fixed-route express service – currently in operation, demonstration funded through FY 2000/01.
- Ø Oxnard Transportation Center improvements – under design, to be completed mid-2000.
- Ø Fillmore Intermodal Transportation Center – design to begin shortly, to be completed 2001.
- Ø Thousand Oaks bus shelters, benches, and kiosks – design to begin FY 2000/01, project to be completed in early 2002.
- Ø Simi Valley West End Industrial Shuttle – in second year of operation.
- Ø Ojai Intermodal Transit Center – design completed, project to be completed by 2001.

Of the four new projects in this category added to the program in 1999, one of these is a capital project, namely the improvements, including expanded parking and improved passenger amenities, at the Camarillo Metrolink Station. The remaining three projects are for transit operations demonstrations:

- Ø A fixed-route shuttle connecting the City of Ojai with the unincorporated community of Mira Monte.

- Ø Two fixed-route bus lines connecting the new California State University Channel Islands campus with Camarillo and Oxnard.
- Ø A demand-response service for the Oxnard Beach area. All of the transit demonstration projects have been placed into operation, while the right-of-way acquisition process is underway for the Camarillo Station project, with project completion anticipated by 2003.

Of the projects approved for programming in 2000, there were seven additional projects in this category. One project is to implement new service between Santa Barbara and Ventura, while another will purchase vehicles for a new water taxi transit service at Channel Islands Harbor in Oxnard. A third project will enhance the City of Simi Valley's Dial-A-Ride communications system, and a fourth project will provide enhanced bus waiting areas in Santa Paula. The remaining three items fund cost increases in previously approved projects.

The total federal funding for these projects was \$7,192,000, representing 6% of the total federal funds for TCMs.

Bicycle and Pedestrian Facilities

The third priority for CMAQ funds is Bicycle and Pedestrian projects. The bicycle and pedestrian projects (programs) are on-going, and the following is their status:

- Ø Arroyo Simi Bike Trail in Simi Valley – in final design, to be completed in 2001.
- Ø Santa Paula Trail – environmental clearance underway, project to be complete by 2002.
- Ø Moorpark Pedestrian Improvements – design consultant procurement underway, project to be completed in 2001.
- Ø Ojai Grand Avenue Bike/Pedestrian Trail – programmed for construction in FY 2002/03.
- Ø Central Avenue Bike Lanes – environmental document underway.
- Ø Countywide Bike Racks/Lockers/Shelters – design to begin early 2001, completion by mid-2002.
- Ø All other projects are complete.

Sixteen new bicycle and pedestrian construction projects were programmed during the 1999 and 2000 prioritization processes, including:

- Ø Bike lanes on Lewis Road (Route 34) from Route 101 to Pleasant Valley Road and on the county portion of Lewis Road from Pleasant Valley to Hueneme Road
- Ø Bike lanes on new extensions of Ventura Boulevard and Ponderosa Drive in Camarillo
- Ø Bike lanes on Cawelti Road near CSUCI
- Ø Purchase of electric bicycles and related facilities for CSUCI internal campus circulation
- Ø Extension of the Santa Paula bikepath

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- Ø Bike lanes and sidewalks on Stanley Avenue in Ventura
 - Ø Bike path on the Santa Paula Branch right-of-way from Piru to Rancho Camulos
 - Ø Sespe Creek Bikepath extension
 - Ø Bike/pedestrian facilities adjacent to Oxnard Boulevard (Route 1) and 5th Street (Route 34) in Oxnard
 - Ø Pedestrian improvements on the California Street bridge in Ventura
 - Ø Various bike path segments to complete a continuous facility parallel to Route 126 in Ventura
 - Ø Widening of the Route 150 bridge over San Antonio Creek in Ojai to provide room for bicyclists and pedestrians
 - Ø Calleguas Creek Bikepath in Camarillo
 - Ø Bike lane on Channel Islands Boulevard from Victoria to Patterson Road
 - Ø Piru Bikepath
 - Ø Thousand Oaks Boulevard pedestrian enhancements.

The total federal funding for these projects was \$16,361,000, representing 13% of the total federal funds for TCMs.

Traffic Flow Improvements and Other Projects

The fourth priority for CMAQ funding continues to be traffic flow improvements supporting TCM C, Traffic Flow Improvement Strategy. In 1999 and 2000, VCTC programmed four such projects:

- Ø Signal interconnect on Tierra Rejada in the City of Moorpark
- Ø Signal coordination system improvements in the City of Thousand Oaks
- Ø Expansion of the signal coordination to include more intersections in Thousand Oaks
- Ø Closure of gaps in the signal synchronization system throughout Oxnard.

All previously programmed projects are complete, with the following exceptions:

- Ø Route 118/23/Donlon intersection realignment – environmental process underway.
- Ø Victoria/Route 101 ramp improvements – under design, to be completed in 2002 (additional funds were added to this project in the 2000 CMAQ program).
- Ø Route 118 signal synchronization in Moorpark – consultant procurement underway, project to be completed 2001.

The following is the status of traffic flow improvement projects programmed through the STIP:

- Ø Route 1 Freeway at Rice/Pleasant Valley – project awarded, completion scheduled for 2003.
- Ø Route 101 Freeway at Lewis Road (Route 34) – under design, completion scheduled for 2003.

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- Ø Route 101 Freeway at Seaward Avenue – under construction, completion scheduled for 2000.

The total federal funding for these projects was of \$93,235,000, representing 77% of the total federal funds for TCMs.

Supplemental CMAQ Project Documentation

State Highways

VEN990304 - Route 34 Bike Lanes: Widen Lewis Road between Pleasant Valley Road and the U.S. 101 Freeway to provide 8-foot bicycle lanes.

VEN54037 - Route 101/Victoria Ramps: Improve northside of the Victoria Avenue/U.S. 101 interchange to lengthen the northbound off-ramps to meet year 2015 traffic volumes.

VEN990316 - Route 150 Bridge Widening: Install new bridge crossing of Highway 150 over San Antonio Creek to allow for the safe and dedicated crossing of pedestrians and cyclists, per the need identified in the Ojai Bike/Pedestrian Master Plan.

VEN54170 - L.A. Avenue Traffic Signal Interconnect: In City of Moorpark, construct traffic signal interconnection and synchronization system for the existing and proposed future traffic signals on Los Angeles Avenue (Route 118) through the City of Moorpark. The conceptual design calls for the placement of electrical conduits, wiring, and signal controller equipment modifications to allow the hard-wire interconnect and coordinated operation of existing and future traffic signals along this highway. The purpose of this project is to improve the flow of traffic and decrease vehicle exhaust emissions on this heavily used roadway.

Local Highways

VEN990305 - Ponderosa / Ventura Blvd Bike Lane: In City of Camarillo, widen upcoming extension of Ponderosa Drive from Earl Joseph to Ventura Boulevard to include bike lanes; and widen future extension of Ventura Boulevard from Ponderosa to Central Avenue to include bike lanes.

VEN990314 - Sespe Creek Bikepath: In City of Fillmore extend the existing Sespe Creek Bikepath up to the North Fillmore Industrial Park where the major employment centers in the city are located. The work includes grading, paving fencing, and environmental landscaping.

VEN54171 - Arroyo Simi Trail Study: In City of Moorpark, develop feasibility study and implementation plan for the construction of a pedestrian, bicycle trail along the Arroyo Simi in the westerly end of the City of Moorpark, easterly through the City

and the unincorporated County area east of the City, to the westerly terminus of the existing trail system along the Arroyo within the City of Simi Valley. The purpose of the study is to identify the problems and/or obstacles to the construction of the project (right-of-way needs, topography, environmentally sensitive areas, wetland preservation, engineering issues, access, future maintenance responsibilities, construction and maintenance funding, etc.).

VEN990315 - Tierra Rejada Road Signal Interconnect: In City of Moorpark, construct traffic signal interconnection and synchronization system for the traffic signals on Tierra Rejada Road from Los Angeles Avenue (Route 118) to the Route 23 Freeway. The length of the project is 3.6 miles (5.8 km). The design will likely provide for construction of conduits, wiring, signal controller equipment and other required improvements necessary to interconnect the traffic signal controllers to allow for the coordination of the operation of the traffic signal controllers. The purpose of the project is to improve the flow of traffic, reduce congestion and decrease vehicle emissions.

VEN54164 - Grand Avenue Bicycle Trail: In City of Ojai, construct dedicated bike path/pedestrian walkway to match Ojai Valley Trail along Grand Avenue from Signal Street to Gridley Road.

VEN54040 - Oxnard Signal Synchronization: In City of Oxnard, expand the SCOOT signal synchronization system to additional intersections. This system reduces acceleration and deceleration activities while operating motor vehicles, through use of sensors which identify the traffic as it leaves an intersection, timing the signals to provide optimum traffic volumes to clear the intersection before the next red cycle.

VEN990317 - Oxnard Boulevard / 5th Street Bicycle/Pedestrian Facilities: In City of Oxnard, construct off-street new bicycle and pedestrian facilities along Oxnard Boulevard (Route 1) from Vineyard Avenue (Route 232) and 5th Street (Route 34), and along 5th Street from Oxnard Boulevard to Rose Avenue. This project will enhance bicycle and pedestrian access to the Oxnard Transportation Center at Oxnard/5th.

VEN990319 - California Street Pedestrian Enhancements: In City of Ventura, construct wider sidewalk, install street lighting, install new bridge railing, install landscaping, on California Street Bridge over Route 101, so as to enhance pedestrian connection between Downtown commercial area and the beach/pier area.

VEN990320 - Route 126 Bike Path: In City of Ventura, construct bike path and landscaping parallel to Route 126 from Harmon Barranca to Kimball Road, and along Harmon Barranca from Route 126 to Telephone Road, and along Route 126 adjacent to the Imperial Mobile Home Park near Portola Road, to establish a continuous connection along most of Route 126 through Ventura.

VEN990341 – Surfers’ Point Bike Path: In City of Ventura, environmental/design phases for project to restore a 2-km long bike/pedestrian segment of the Omer Rains Bicentennial Bikeway that will establish a connection to the new Ventura River Trail. The project will eliminate a parking area to reestablish a beach to control erosion and realign the bike trail location to protect it from the coastal storm erosion, thus providing a continuous bike path along the coast.

VEN990605 - Stanley Avenue Bike Path: In the City of Ventura, construct a sidewalk and bike lane along Stanley Avenue between Ventura Avenue and the Route 33 Freeway. This street currently has no sidewalk or bike lane. This will provide a pedestrian and bicycle connection of the West End commercial, industrial, and residential area of Ventura to the Ventura River Bike Trail.

VEN54168 - Santa Paula Bikeway/Walkway: In City of Santa Paula, construct bicycle path and walkway adjacent to railroad from Peck Road to Santa Paula Creek with a connection to Telegraph Road and Harding Park.

VEN54051 - Arroyo Simi Bike Trail: In City of Simi Valley, construct off-street Class I bike path from the Simi Valle Metrolink Station to Corriganville Park.

VEN990328 - CNG Street Sweepers: In City of Thousand Oaks, CMAQ to pay for incremental CNG cost new street sweepers to be purchased in replacement of existing diesel street sweepers, in support of State Implementation Plan goals for emission reductions from medium and heavy duty vehicles.

VEN990330 - CNG Infrastructure: In City of Thousand Oaks, purchase CNG station from Southern California Gas Company and replace existing CNG compressor. California Public Utilities Commission has directed the Gas Company to divest a number of CNG stations located on public property, including the Thousand Oaks fueling facility. This purchase is necessary to ensure long-term fueling capabilities and pricing stability for the City’s CNG transit buses and other vehicles. The existing CNG compressor has a history of operational instability and will need to be replaced to provide the operation consistency expected of a fueling system.

VEN990327 - CNG Vans for Vanpools: In City of Thousand Oaks, purchase CNG vans for van pools to replace five existing City pool vehicles. The vehicles will be made available for take home car/van pooling.

VEN990331 - Extend Traffic Signal Coordination: In City of Thousand Oaks, expand Master Traffic Signal Coordination System by adding several arterial roadways to the City’s computerized system. Project will involve hard wire telephone communication line connections from 39 existing signals to the central master computer, upgrading controllers, installing field-mounted master and slave communication/coordination systems, underground conduits and wiring, telephone riser conduits and wiring and miscellaneous work as required.

VEN990329 - Thousand Oaks Boulevard Pedestrian Safety: In City of Thousand Oaks, construct pedestrian safety improvements on Thousand Oaks Boulevard between Moorpark Road, the civics Arts Plaza, and the new Transportation Facility on Rancho Road. The anticipated project includes preliminary studies to determine the best pedestrian crossing locations and improvements to pedestrians, followed by a construction project. The construction phase includes repair and replacement of existing sidewalks where pedestrian impediments occur, new concrete sidewalk installations to connect existing sidewalks to each other, disabled access ramp improvements, lighted/electronic pedestrian marked crosswalk systems at key locations, modifications to existing traffic signals to improve pedestrian timing, safety street lighting, and bollards or concrete barriers to protect pedestrians on sidewalk areas.

VEN990332 - Upgrade Existing Traffic Signal Coordination System: In the City of Thousand Oaks, upgrade existing Master Traffic Signal Coordination System, to add more expansion capabilities including new, more powerful software, to make the system more user friendly, thus reducing the amount of time necessary for staff to make adjustments and modifications to traffic signal time and operations; video detection at key intersections, allowing more versatility in making timing adjustments; and several hard wire connections.

VEN54124 - Central Avenue Bike Lanes: In unincorporated area, construct two 8-foot bike lanes within existing right-of-way on Central Avenue between Rose Avenue and Vineyard Avenue (Route 232). After construction, Central Avenue will consist of two 12-foot lanes and two 8-foot Class II bicycle lanes. The project will require grading, drainage improvements and intersection widening to accommodate the necessary pavement width to provide Class II bicycle lanes.

VEN54123 - Central Avenue Bike Lanes: In unincorporated area, construct two 8-foot bike lanes within existing right-of-way on Central Avenue between Camarillo City Limits and Santa Clara Avenue. The existing pavement width is currently 24 feet. After construction, Central Avenue will consist of two 12-foot lanes and two 8-foot Class II bicycle lanes. The project will require grading, drainage improvements and intersection widening to accommodate the necessary pavement width to provide Class II bicycle lanes.

VEN54047 - Springville Bikeway: In unincorporated area, construct bike path across the Beardsley Channel parallel to and on the south side of Route 101.

VEN54131 - Realign Donlon Road: In unincorporated area, realign Donlon Road to create a four-way intersection at Los Angeles Avenue (Route 118) and Somis Road (Route 34).

VEN990306 - Cawelti Road Bike Lanes: In unincorporated area, construct two 8-foot bike lanes on Cawelti Road between Las Posas Road and Lewis Road. After construction, Cawelti Road will consist of two 12-foot lanes and two 8-foot Class II

bicycle lanes. The project will require grading, drainage improvements and intersection widening to accommodate the necessary pavement width to provide Class II bicycle lanes.

VEN990307 - Lewis Road Bike Lanes: In unincorporated area, construct two 8-foot bike lanes in conjunction with the widening of Lewis Road from the Camarillo City Limit to Hueneme Road, resulting in 64 feet of pavement with an unpaved 14-foot median. After construction, Lewis Road will consist of four 12-foot lanes, two 8-foot Class II bicycle lanes and an unpaved median. The project will require grading, drainage improvements and intersection widening to accommodate the necessary pavement width to provide Class II bicycle lanes.

VEN990310 - Piru/Camulos Bike Path: In unincorporated area, construct Class I bicycle lane and pedestrian path between Piru and Rancho Camulos, relay adjacent track, install fencing, and install train platform at Rancho Camulos.

VEN54169 - Countywide Bike Lockers/Racks/Bus Shelters: Install bike racks, bike lockers, and bus shelters at selected locations throughout Ventura county. Locations will be identified where bike amenities and bus shelters will likely attract significant usage and encourage additional bicycling and transit usage. Many of the lockers and shelters will be placed at bus stops to facilitate use of the bicycle mode to access public transportation.

VEN54130 - Regional Transportation Occupations Training: At Ventura College, acquire necessary equipment to provide for training in CNG bus and heavy truck fleet maintenance, as part of the Regional Transportation Occupations Training Center.

VEN990313 - CSUCI Electric Bicycle Project: At California State University Channel Islands, purchase electric bicycles, bicycle racks, and photovoltaic chargers for use by students and faculty in on-campus circulation, and by campus maintenance and police staff.

VEN990333 - Santa Paula Branch Line Trail EIR/EIS: Prepare EIR/EIS for bicycle/pedestrian trail in the Santa Paula Branch railroad right-of-way through the cities of Ventura, Santa Paula, and Fillmore, and the unincorporated communities of Saticoy and Piru.

VEN000609 - Oxnard Signal Synchronization Gap Closure: In Oxnard, install signal synchronization conduit and cable at various locations citywide. Project will primarily focus on closing gaps between long strings of already synchronized signals.

VEN991219 - Channel Islands Boulevard Bike Lanes: In Port Hueneme, construct Class II bike lanes on Channel Islands Boulevard between Victoria and Ventura. This project will require right-of-way acquisition from the Ventura County Navy Base.

VEN991225 - Calleguas Creek Bike Path: In Camarillo, construct Class I bike path along Calleguas Creek from Mission Oaks Boulevard to Upland Road.

VEN000613 - Convert 3 City Vehicles to Alternate Fuel: In Ojai, convert three vehicles in the city's fleet from diesel or gasoline to clean-fuel.

Transit

VEN54167 - Fillmore Intermodal Transportation Center: In Fillmore, construct intermodal transportation center located on Santa Clara Avenue at the Senior Center, and purchase an LPG trolley to serve the intermodal center as part of the dial-a-ride service.

VEN54163 - Ojai Intermodal Transportation Center: In Ojai, construct intermodal transportation center and parking hub for the Ojai Valley Trail at the intersection of Highways 33 and 150 (AY@ intersection).

VEN54165 - Oxnard Transportation Center Improvements: In Oxnard, improve Oxnard Transportation Center (OTC) to add bus islands (to load and unload passengers), improve vehicular and pedestrian flows within and around the site, reconfigure parking, improve lighting, and prepare master plan for the addition of new pedestrian-oriented uses adjacent to the OTC. By improving the image and ease of use of the OTC, new users will be attracted.

VEN990318 - Oxnard Harbor/Beaches Transit Service Demonstration: In Oxnard, three year transit demonstration serving the Oxnard Transportation Center, Oxnard Airport, Channel Islands Harbor and beach communities. Service is proposed to be demand responsive, operating 7 a.m. - 7 p.m. daily. This will provide a new service to an area currently unserved by transit.

VEN54159 - Five Replacement CNG Simi Valley Transit Buses: In Simi Valley, purchase CNG buses to replace existing diesel-fueled buses, including lift, two-way radio and electronic farebox with spare cashbox.

VEN54158 - One Expansion Simi Valley Transit Paratransit Van: In Simi Valley, purchase CNG paratransit van for expansion, including lift, two-way radio, and electronic farebox with spare cash box.

VEN54156 - West End Industrial Shuttle: In Simi Valley, purchase one paratransit shuttle van for a three-year West End Industrial Shuttle demonstration program, and provide operating costs for three years.

VEN990323 - Simi Valley Transit CNG Maintenance Equipment: In Simi Valley, purchase and install backup CNG compressor for Simi Valley Transit's CNG fueling facility, to ensure an uninterrupted fuel supply. Provide cover and enclosure to protect

the CNG compressor, dryer, and system controls. Purchase and install freestanding mezzanine floor above the existing parts storage area, and purchase 50 storage cabinets, install stairs and gate for forklift access, to provide sufficient storage for CNG bus parts in addition to the storage for diesel bus parts, which is currently at maximum capacity and must be maintained.

VEN990324 - Simi Valley Transit CNG Fastfill Capability: In Simi Valley, plan and install CNG equipment to allow filling of bus in under on hour, thus allowing response to special conditions requiring rapid filling of a bus.

VEN990326 - One Simi Valley Transit CNG Bus for Expansion: In Simi Valley, purchase on expansion low-floor CNG transit bus with electronic farebox, spare cashbox, and two-way radio, for expansion of fixed-route service along Cochran Street/Los Angeles Avenue corridor.

VEN990325 - Three Simi Valley Transit Expansion Paratransit Vans: In Simi Valley, purchase three new (expansion) vans, low floor, with electronic fareboxes, spare cashboxes, and two-way radios. ADA/dial-a-ride ridership is anticipated to increase to the point that new vans will be required to meet ADA requirements.

VEN990321 - Western Ventura County Coordinated Paratransit Service: The SCAT ADA complementary paratransit service, the senior transportation services operated by SCAT member agencies, and senior nutrition transportation services are to be combined under one umbrella service operated by SCAT. This project will provide 19 CNG vehicles with two-way radios and fareboxes to operate this coordinated paratransit service and an automated scheduling/ dispatching system with the associated hardware and software. This will provide a dramatic expansion of service and improve the efficiency of scheduling.

VEN54174 - Purchase Three Thousand Oaks Transit Expansion Buses: In Thousand Oaks, purchase three CNG buses to allow the expansion of Thousand Oaks Transit service to reduce headways and increase service to additional areas within the Conejo Valley, including the City of Westlake Village.

VEN990308 - CalWORKs Vanpool Project: The CalWORKs Clean Air Van Pooling Project will provide 9-12 CNG passenger vans to provide Countywide transportation for CalWORKs families to employment, job interviews, and child care. In addition, the project will develop a CNG fuel site at the County Government Center to provide time-fill and fast-fill capability for the vans.

VEN990309 - Mira Monte Trolley: Provide two year transit demonstration shuttle bus service connecting Ojai and Mira Monte. This will provide service in a corridor not currently serviced by transit.

VEN54112 - Oxnard to Warner Center Demonstration: Provide three year demonstration service to run an express bus service from Ventura County to the

Warner Center area, terminating at the Warner Center transit hub. The service provides 5 trips in the morning and 5 trips in the P.M., and requires the leasing of three vehicles.

VEN54166 - Santa Paula Branch Line Extension Study: Conduct preliminary engineering and design for reconstruction of the Santa Paula Branch line from Piru Creek to the Los Angeles County Line (approximately 6.5 miles).

VEN990303 - Camarillo Metrolink Station Expansion: In Camarillo, expand the Metrolink station to provide additional parking and improve site amenities, including a bus loading zone, shelter, bicycle storage, and pedestrian walkways.

VEN990312 - Shuttle Service to California State University at Channel Islands (CSUCI): Provide three year demonstration shuttle bus service to provide access to the new CSUCI campus. The shuttles will operate from 7 a.m. to 11 p.m. weekdays with reduced service on Saturday, on two routes connecting the campus with the Camarillo Metrolink Station and the Centerpoint Mall in Oxnard.

VEN000604 - Ventura/Santa Barbara Demonstration Service: Provide three year demonstration fixed route express bus service between the cities of Ventura and Santa Barbara seven days per week from 6 a.m. to 6 p.m.

VEN000611 - Dial-a-Ride Communications Enhancement: In Simi Valley, enhance communications for the fleet of 8 ADA/Dial-a-Ride vans through purchase, installation, and interface coordination of mobile data terminals hardware and software, automatic vehicle location system with GPS interface, and software for on-board interface with existing scheduling system.

VEN000605 - Water Taxis for Channel Islands Harbor: In Oxnard, purchase for vessels for use as water taxis to serve Channel Islands Harbor on a regular transit schedule.

VEN000612 - Transit Stations at Mill/Ventura & K-Mart: In Santa Paula, construct bus shelters and benches at northeast corner of Mill Street and Ventura St., and at K-Mart on Faulkner Road.

VEN000602 - Replace 4 Transit Buses with CNG: In Oxnard / Ventura / Port Hueneme / Ojai / county unincorporated, replace four 35-foot 1982 diesel transit back-up buses with compressed natural gas buses.

VEN000601 - Thousand Oaks Community Transportation Center: Construct bus transfer center at Rancho Road adjacent to Route 101 Freeway. Facility to include bus shelters, parking, rest rooms, and transit enhancements.

Funding of TCM Projects in Ventura County by Category – 1999 CMAQ Program

Project Name	Lead Agency	CMAQ Funding
Clean Fuel Buses		
CalWORKs Vehicles	County	\$ 1,017,750
Backup CNG Compressor	Simi Valley	\$ 106,200
CNG Fueling Facility Cover/Encl	Simi Valley	\$ 26,550
Develop Fast Fill Capability	Simi Valley	\$ 97,350
Expand CNG Bus Parts Storage	Simi Valley	\$ 31,000
New CNG Transit Bus	Simi Valley	\$ 354,000
New CNG Paratransit Van	Simi Valley	\$ 132,700
New CNG Paratransit Van	Simi Valley	\$ 137,200
New CNG Paratransit Van	Simi Valley	\$ 141,600
Western County Coord Paratransit	SCAT	\$ 1,460,250
Improved Public Transit		
Camarillo Station Improvements	Camarillo	\$ 2,300,000
Ojai Trolley Operations	County	\$ 192,000
CSUCI Shuttle Operations	CSUCI	\$ 1,550,330
Intermodal Center Revision	Fillmore	\$ 155,000
Harbor/Beaches Transit Service	Oxnard	\$ 432,000
Bicycle/Pedestrian Facilities		
Lewis Road Bikelanes Pl Vly/101	Camarillo	\$ 700,000
Ponderosa/Ventura Blvd. Bikelanes	Camarillo	\$ 733,000
Calwelti Bikelane	County	\$ 2,160,123
Lewis Road Bikelanes Cam/Hueneme	County	\$ 1,881,262
Rancho Camulos RR & Bike Path	County	\$ 300,000
Sespe Creek Bikepath Phase II	Fillmore	\$ 125,000
Highway 150 @ San Antonio Cr.	Ojai	\$ 740,000
Bike/Ped Oxnard & 5 th	Oxnard	\$ 960,000
Stanley Avenue Bike Lane	San Buenaventura	\$ 687,381
Calif. Street Bridge Upgrade	San Buenaventura	\$ 329,000
SR 126 Bike Path	San Buenaventura	\$ 632,500
Bike Trail Along ROW	Santa Paula	\$ 970,000
Ped Safety T.O. Blvd	T.O.	\$ 200,000
Santa Paula Branch EIR/EIS	VCTC	\$ 100,000
Traffic Flow Improvement/Other		
Electric Bicycle Program	CSUCI	\$ 99,621
Signal Interconnect Tierra Rejada	Moorpark	\$ 350,000
LNG Locomotive Conversion	SCRRA	\$ 140,000
CNG Station/Compressor	T.O.	\$ 240,000
Five CNG Vans for Vanpools	T.O.	\$ 108,000
Four CNG Street Sweepers	T.O.	\$ 120,000
Traffic Signal Coordination Exp.	T.O.	\$ 150,000
Upgrade Existing Traffic Signal Coordination	T.O.	\$ 240,000
Total		\$19,082,067

EXHIBIT A: MAPs

- Ø Air Basins
- Ø Air Districts
- Ø Federal Non-attainment Areas
(Ozone, PM₁₀, CO, NO₂)

Air Basins in the Region

The map displays the following air basins and county boundaries:

- Air Basins (AB):**
 - MDAB (Metropolitan Desert Air Basin) - Light gray shading, covering San Bernardino County.
 - SCAB (South Coast Air Basin) - Medium gray shading, covering Los Angeles County and Orange County.
 - SSAB (South Salton Sea Air Basin) - Diagonal hatching, covering Imperial County.
 - VC/SCCAB (Ventura County Central Coast Air Basin) - Diagonal hatching, covering Ventura County.
 - Mojave Desert AB - Light gray shading, covering the northern part of the region.
 - South Coast AB - Medium gray shading, covering the southern part of the region.
 - Salton Sea AB - Diagonal hatching, covering the eastern part of the region.
 - VC/South Central Coast AB - Diagonal hatching, covering the southern part of the region.
- County Boundaries:**
 - San Bernardino County
 - Los Angeles County
 - Orange County
 - Riverside County
 - Imperial County
 - Ventura County

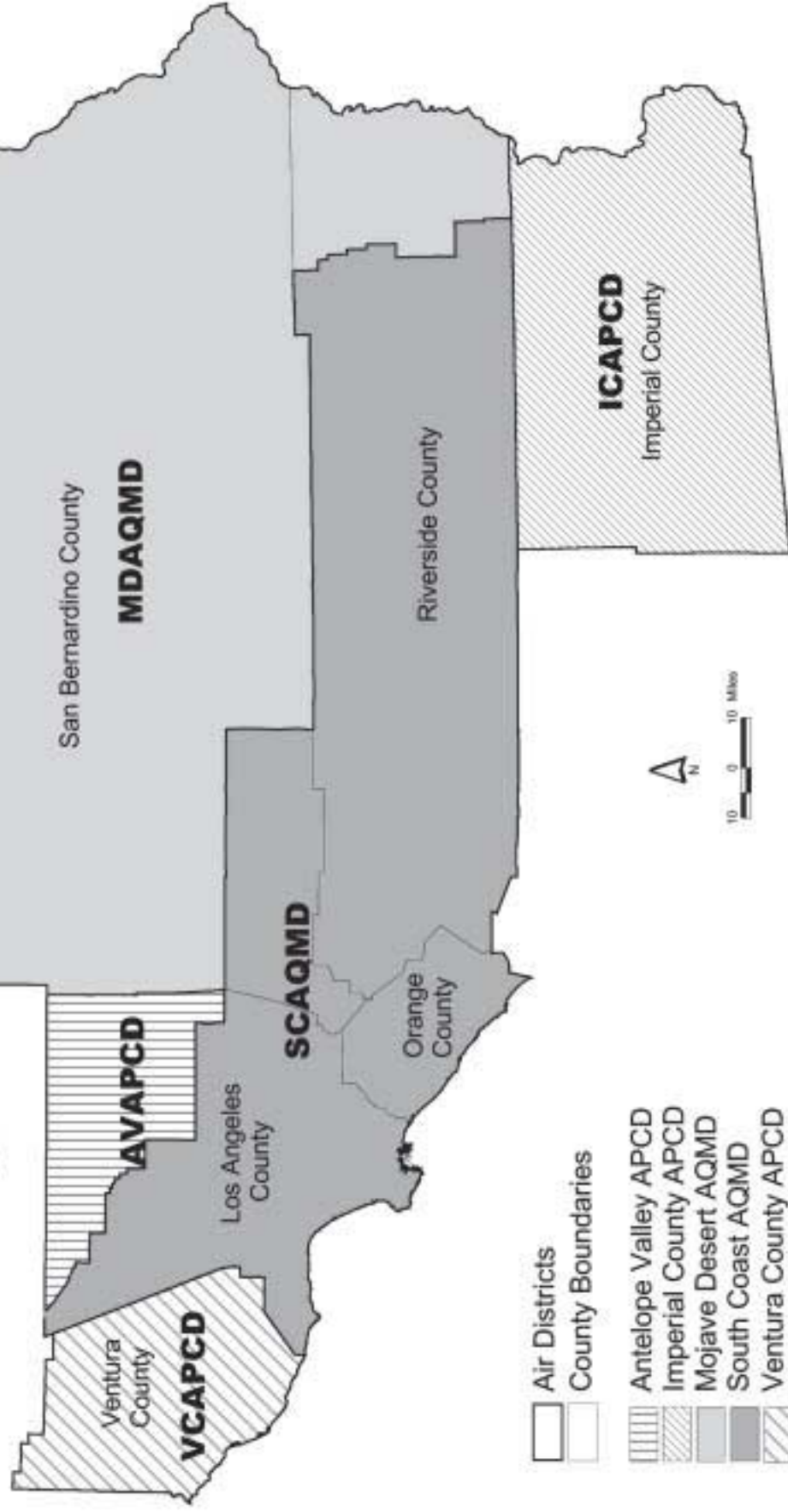
A scale bar indicates distances up to 10 miles, and a north arrow is present.



SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS
April 2000

Abstract

Air Districts in the Region



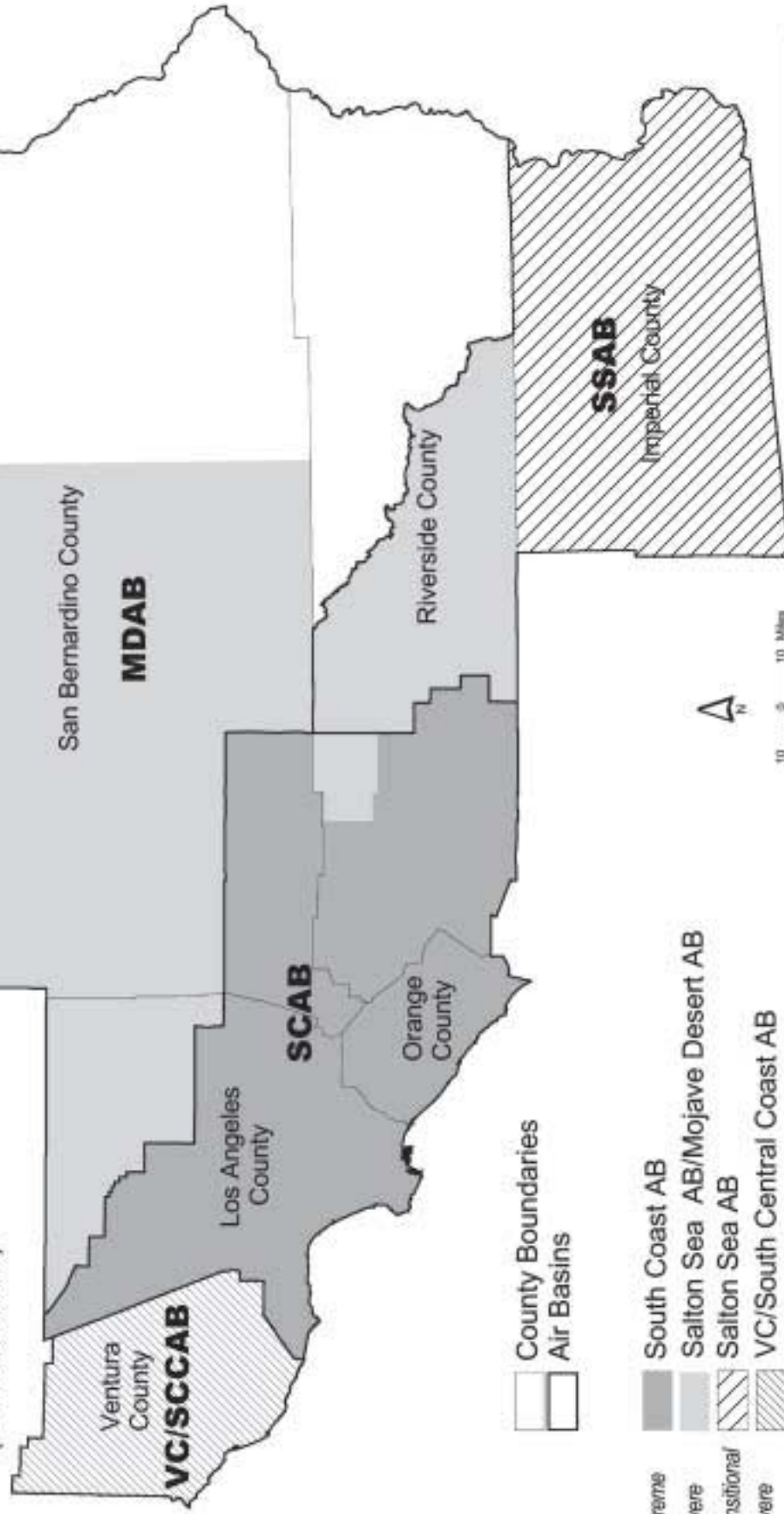
Source: Cal Air Resources Board and Air Districts

APCD: Air Pollution Control District
AQMD: Air Quality Management District

Exhibit H-2

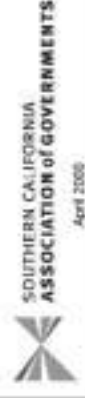
Federal Non-attainment Areas in the Region

Ozone
(1-Hr. Standard)



Source: Cal Air Resources Board and Air Districts

(Particulate Matter Less Than Ten Microns in Size)



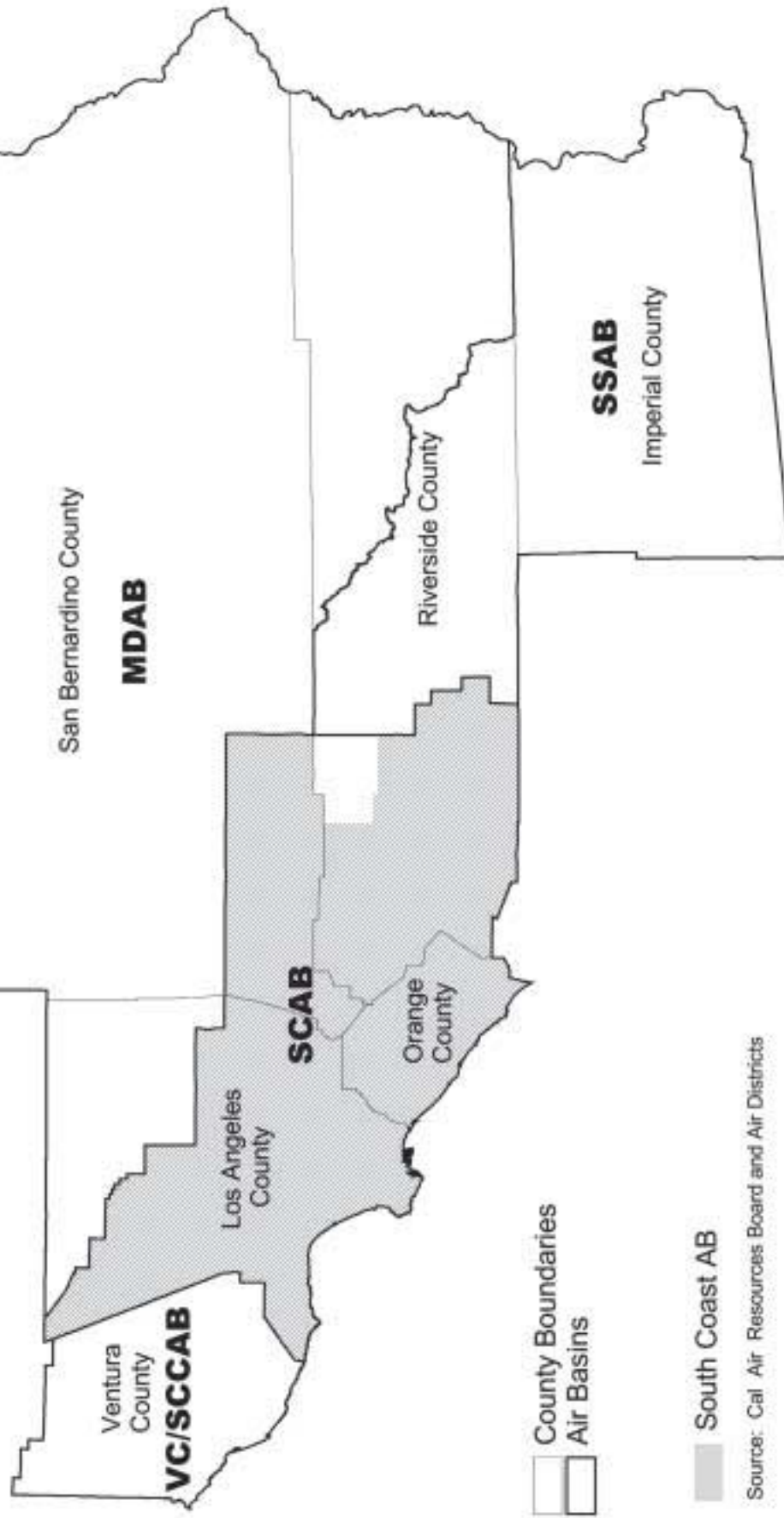
CO
(Carbon Monoxide)



SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
April 2000

[illegible]

Federal Non-attainment Areas in the Region **NO₂** (Nitrogen Dioxide)



Source: Cal Air Resources Board and Air Districts



Ozone
(8-Hr. Standard)

- Source: Cal Air Resources Board and Air Districts



SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
April 2000

EXHIBIT B: EMISSIONS BUDGETS

18 July 2000

DRAFT

TO: Charles Keynejad, SCAG

FROM: Doug Thompson, ARB/AQTPB
916/322-7062

SUBJECT: **Emissions Budgets**

This memo is to respond to your request for an updated listing of emissions budgets that are currently applicable in the SCAG region for assessments of transportation conformity.

South Coast. U.S. EPA has published in the Federal Register its approval of the 1997 Air Quality Management Plan (AQMP) for ozone in the South Coast Air Basin, as amended in 1999. This SIP revision became effective on May 10, 2000. As a result, the following ozone precursor budgets apply for conformity findings for transportation plans and programs in the South Coast, replacing the budgets in the 1994 Ozone SIP.

	1999	2002	2005	2008	2010
VOC (tpd)	354.0	273.1	206.0	145.4	80.7
NOx (tpd)	526.8	447.1	369.1	310.1	277.8

Documentation for these budgets is found in Attachment 1 to Appendix V of the 1997 AQMP (pages V-I-1 to V-I-20). The budgets are listed by U.S. EPA in Table 8 of their proposal to approve the 1997 Ozone SIP revision for the South Coast, published in the Federal Register on February 8, 2000. Emissions were calculated with EMFAC7G emission factors, and no ROG to VOC conversion is necessary.

An additional emissions budget for the South Coast is currently applicable for conformity findings, drawn from the approved maintenance plan for nitrogen dioxide (NO₂). The motor vehicle emissions budget for NOx from this plan is 657.3 tpd. This budget was calculated with EMFAC7G. The NO₂ redesignation request and maintenance plan were approved by U.S. EPA on July 24, 1998 and became effective September 22, 1998.

There are no currently applicable emissions budgets for carbon monoxide (CO) or particulates (PM₁₀) for the South Coast. An interim approval of the CO SIP by U.S. EPA on April 21, 1998, expired without final action, and there has

been no finding of emission budget adequacy for CO. Similarly, the PM₁₀ budgets in the 1997 AQMP have not been found adequate by EPA.

Ventura County. The ozone precursor budgets for Ventura County remain those adopted in the 1994 Ozone SIP, approved by U.S. EPA and published in the Federal Register on January 8, 1997. The budgets were calculated with EMFAC7F. The VOC equivalent for 1994 ROG budgets may be obtained by factoring them by .985

	1999	2002	2005
ROG (tpd)	16.20	12.47	9.82
NOx (tpd)	27.04	24.36	21.33

Southeast Desert. The ozone precursor budgets for the Southeast Desert Modified Air Quality Management Area are also drawn from the approved 1994 Ozone SIP. The budgets include on-road emissions calculated with EMFAC7F for the San Bernardino County (Mojave Desert), Los Angeles County (Antelope Valley) and Riverside County (Coachella Valley) portions of the nonattainment area. Again, the VOC equivalent for 1994 ROG budgets may be obtained by factoring them by .985

	1999	2002	2005	2007
ROG (tpd)	36.25	31.07	26.45	23.31
NOx (tpd)	70.03	65.79	57.06	54.82

~~The desert region also has several PM₁₀ nonattainment areas for which~~ attainment and maintenance plans have been submitted to U.S. EPA. However, there are no currently applicable PM₁₀ budgets for these areas, which include the Coachella Valley in Riverside County, the Mojave Desert planning area of San Bernardino County, and the Searles Valley (Trona portion), San Bernardino County. On November 23, 1999, U.S. EPA notified ARB that the PM₁₀ emissions budgets for these areas, as defined in their SIP submittals, are currently inadequate for conformity purposes.

Imperial County. As a transitional ozone nonattainment area, Imperial County is not required to submit a SIP revision. In addition, no attainment demonstration has been submitted for PM₁₀. Thus, no emissions budgets are currently applicable for Imperial County.

From: Doug Thompson <dthompso@arb.ca.gov>
To: "Keynejad, Charles" <keynejad@scag.ca.gov>
Date: 5/24/01 12:36PM
Subject: South Coast budgets

Charles, per your request, the on-road ozone precursor budgets in the 1999 South Coast SIP, drawn from the Appendix V, Attachment I are

	ROG/VOC	NOx
2002	273.103	447.119
2005	206.034	369.122
2008	145.354	310.078
2010	80.733	277.766

Our convention for ozone budgets has been to round to two decimal places.

--Doug

CC: Joseph Calavita <jcalavit@arb.ca.gov>

**EXHIBIT C:
ARB's APRIL 17, 2000
REVISED CONTROL FACTORS
and
ARB's August 18, 2000
NEW CONTROL FACTORS FOR SCAB**

Note:

These are the revised Air Resources Board (ARB) control factors based on the review of California's Enhanced Vehicle Inspection and Maintenance Program.



Justin H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

2020 L Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov



Gray Davis
Governor

August 18, 2000

Mr. Mark Pisano
Executive Director
Southern California Association of Governments
818 West 7th Street
Los Angeles, California 90017

Dear Mr. Pisano:

As you know, efforts by the Southern California Association of Governments (SCAG) to determine conformity for its 2000-2006 Regional Transportation Improvement Program (RTIP) have been impeded by reported shortfalls in emission reductions for the Enhanced Inspection and Maintenance Program and other State Implementation Plan (SIP) control measures. I am pleased to report that our proposal to address these shortfalls has been approved by the responsible federal agencies. With this letter Air Resources Board (ARB) staff is providing revised control factors, for use in this RTIP conformity assessment, which credit the full State commitment in the applicable 1999 Ozone SIP for emission reductions from on-road vehicles.

This correspondence includes two enclosures. The first contains ARB's revised on-road control factors for the South Coast Air Basin, for the years 2002, 2005, 2008 and 2010, including a table showing current estimates of emission reductions relative to SIP commitments. The second enclosure is the letter of August 17, 2000, from ARB Executive Officer Michael P. Kenny to U.S. EPA Regional Administrator Felicia Marcus, which details our approach to address the conformity-related SIP shortfalls. This approach, which we developed in coordination with SCAG and the South Coast Air Quality Management District, has been carefully reviewed by U.S. EPA, the Federal Highway Administration and the Federal Transit Administration, and is supported by those agencies.

Use of ARB's EMFAC7G model and the revised control factors should result in a positive conformity determination for the current RTIP, if modeling assumptions, motor vehicle activity, and emission reductions from SCAG transportation measures are consistent with the 1999 SIP. In some cases, particularly for oxides of nitrogen (NOx), emission reductions from State measures will be greater than our current on-road SIP commitments. Where this occurs, it is important to understand that any reductions beyond the State's on-road SIP commitments are being used to comply with our overall SIP attainment obligation.

California Environmental Protection Agency

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H-103

Mr. Mark Pisano

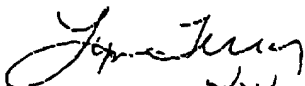
August 18, 2000

Page 2

The enclosed control factors replace the preliminary version provided to SCAG on April 17, 2000. The factors are unique to the Basin, applicable to EMFAC7G and Direct Travel Input Model (DTIM) results, consistent with emissions inventory methods used in the applicable 1999 Ozone SIP. Consistent with past guidance, the factors for 2010 may be used for all years thereafter.

We look forward to working with you in the coming months to meet the challenges of the 2001 SIP and the 2001 Regional Transportation Plan. If you have questions, please call me at (916) 445-4383 or have your staff contact Ms. Cynthia Marvin, Chief, Air Quality and Transportation Planning Branch, at (916) 322-7236.

Sincerely,



Michael P. Kenny
Executive Officer

Enclosures

~~cc:~~ Mr. Barry Wallerstein, D.Env. (without Enclosures)
Executive Officer
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, California 91765-4182

2005

****Negative control factors for I/M indicate increased emissions over the EMFAC7G baseline.**

Emission reductions from original SIP inventory

Emission Reductions By Vehicle Category (tpd)

ROG	Baseline Inventory	Emission Reductions	Remaining Inventory
Light Duty Passenger and Trucks	183.5	8.4	175.1
Medium Duty Trucks	9.4	0.7	8.7
Heavy Duty Gasoline Trucks	6.6	0.8	5.8
Heavy Duty Diesel Vehicles	15.9	5.3	10.6
Motorcycles	3.9	0.2	3.7
TOTAL ON-ROAD	219.3	15.4	203.9

NO_x

Light Duty Passenger and Trucks	206.3	16.8	189.4
Medium Duty Trucks	20.0	2.1	17.9
Heavy Duty Gasoline Trucks	29.0	4.8	24.2
Heavy Duty Diesel Vehicles	156.0	30.6	125.4
Motorcycles	1.6	0.1	1.5
TOTAL ON-ROAD	412.9	54.5	358.4

Emission Reductions By Measure (tpd)

Emission Reductions By Measure (tpd)	ROG	NOx
Enhanced I/M (relative to baseline assumption)***	-0.6	2.3
SIP Measures for Gasoline Vehicles (M1/M2)	0.4	4.4
SIP Measures for Diesel Vehicles (M4/M5/M6/M17)	5.3	30.6
Cleaner Burning Gasoline	10.4	17.2
Motorcycle Standards	0.0	0.0

TOTAL ON-ROAD REDUCTIONS

15.4

54.5

***I/M reductions assumed in SIP baseline:

31.0

18.1

Control Factors for California Ozone SIP Measures*
South Coast Nonattainment Area

2008

	Enhanced Insp/Maint**	State/Fed Measures	Total Factor
ROG			
Light Duty Passenger and Trucks	-0.003	0.114	0.111
Medium Duty Trucks	-0.004	0.168	0.164
Heavy-Duty Gasoline Trucks	0.077	0.049	0.126
Heavy-Duty Diesel Vehicles	0.000	0.433	0.433
Motorcycles	0.000	0.106	0.106
NOx			
Light Duty Passenger and Trucks	-0.003	0.186	0.184
Medium Duty Trucks	-0.001	0.274	0.273
Heavy-Duty Gasoline Trucks	0.115	0.061	0.176
Heavy-Duty Diesel Vehicles	0.000	0.333	0.333
Motorcycles	0.000	0.097	0.097

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC7G.
 Apply these factors to the inventory remaining after the regional mobility adjustment.

**Negative control factors for I/M indicate increased emissions over the EMFAC7G baseline.

Emission reductions from original SIP inventory

Emission Reductions By Vehicle Category (tpd)

	Baseline Inventory	Emission Reductions	Remaining Inventory
ROG			
Light Duty Passenger and Trucks	138.6	15.2	121.4
Medium Duty Trucks	7.6	1.2	6.4
Heavy Duty Gasoline Trucks	5.7	0.7	5.0
Heavy Duty Diesel Vehicles	15.8	6.8	8.9
Motorcycles	4.0	0.4	3.6
TOTAL ON-ROAD	169.8	24.4	145.3
NOx			
Light Duty Passenger and Trucks	174.2	32.0	142.1
Medium Duty Trucks	18.6	5.1	13.5
Heavy Duty Gasoline Trucks	25.1	4.4	20.7
Heavy Duty Diesel Vehicles	157.2	52.4	104.8
Motorcycles	1.6	0.2	1.5
TOTAL ON-ROAD	376.7	94.1	282.6

Emission Reductions By Measure (tpd)

	ROG	NOx
Enhanced I/M (relative to baseline assumption)***	0.0	2.4
SIP Measures for Gasoline Vehicles (M1/M2)	2.5	26.1
SIP Measures for Diesel Vehicles (M4/M5/M6/M17)	6.8	52.4
Cleaner Burning Gasoline	7.9	13.1
Motorcycle Standards	0.3	0.0

Remaining ARB Commitments	6.9	0.0
TOTAL ON-ROAD REDUCTIONS	24.4	94.1

***I/M reductions assumed in SIP baseline:	29.3	11.8
--	------	------

Control Factors for California Ozone SIP Measures* South Coast Nonattainment Area

2010

	Enhanced Insp/Maint**	State/Fed Measures	On Road Black Box	Total Factor
ROG				
Light Duty Passenger and Trucks	-0.003	0.146	0.268	0.411
Medium Duty Trucks	-0.003	0.217	0.246	0.460
Heavy-Duty Gasoline Trucks	0.074	0.076	0.266	0.416
Heavy-Duty Diesel Vehicles	0.000	0.549	0.141	0.690
Motorcycles	0.000	0.221	0.244	0.465
NOx				
Light Duty Passenger and Trucks	-0.002	0.283	0.000	0.281
Medium Duty Trucks	-0.001	0.404	0.000	0.404
Heavy-Duty Gasoline Trucks	0.122	0.101	0.000	0.223
Heavy-Duty Diesel Vehicles	0.000	0.421	0.000	0.421
Motorcycles	0.000	0.199	0.000	0.199

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC7G.
Apply these factors to the inventory remaining after the regional mobility adjustment.

**Negative control factors for I/M indicate increased emissions over the EMFAC7G baseline.

Emission reductions from original SIP inventory

Emission Reductions By Vehicle Category (tpd)

	Baseline Inventory	Emission Reductions	Remaining Inventory
ROG			
Light Duty Passenger and Trucks	113.9	46.9	67.0
Medium Duty Trucks	6.5	3.0	3.5
Heavy Duty Gasoline Trucks	5.2	2.2	3.1
Heavy Duty Diesel Vehicles	16.0	11.1	5.0
Motorcycles	4.1	1.9	2.2
TOTAL ON-ROAD	145.7	65.0	80.7

NOx			
Light Duty Passenger and Trucks	159.0	44.7	114.3
Medium Duty Trucks	17.6	7.1	10.5
Heavy Duty Gasoline Trucks	23.2	5.2	18.1
Heavy Duty Diesel Vehicles	161.3	67.9	93.4
Motorcycles	1.6	0.3	1.3
TOTAL ON-ROAD	362.8	125.2	237.6

Emission Reductions By Measure (tpd)

	ROG	NOx
Enhanced I/M (relative to baseline assumption)***	0.0	2.5
SIP Measures for Gasoline Vehicles (M1/M2)	4.1	42.9
SIP Measures for Diesel Vehicles (M4/M5/M6/M17)	6.9	65.9
Cleaner Burning Gasoline	6.6	10.7
Motorcycle Standards	0.8	0.2
Urban Bus Standards		2.0
U.S. EPA's Heavy Duty Gasoline Truck Standards	0.2	1.0
Remaining ARB Commitments	9.6	0.0
Black Box	36.8	0.0
TOTAL ON-ROAD REDUCTIONS	65.0	125.2

***I/M reductions assumed in SIP baseline: 28.3 8.8



Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

2020 L Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov



Gray Davis
Governor

August 17, 2000

Ms. Felicia Marcus
Regional Administrator
Region IX
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Dear Ms. Marcus:

This letter documents how and when the State of California will improve the effectiveness of the Enhanced Vehicle Inspection and Maintenance (I/M) program, also known as Smog Check II, for all nonattainment areas required to implement the program. To address transportation conformity in the South Coast, this letter also reiterates the Air Resources Board's (ARB or Board) commitment to achieve all of the emission reductions identified for our measures affecting on-road vehicles in the 1994 State Implementation Plan (SIP) for Ozone and describes the supplemental measures we are currently evaluating as part of this effort. The combination of improving the Enhanced I/M program and adopting supplemental measures will fulfill the State's obligations to achieve on-road motor vehicle emission reductions and enable transportation conformity findings for the Los Angeles area. We also include commitments from all three responsible agencies to adopt and submit a comprehensive ozone SIP revision for South Coast in 2001.

The 1994 Ozone SIP established ARB's enforceable commitment to achieve emission reductions associated with statewide mobile source measures. The Bureau of Automotive Repair (BAR), which operates the Smog Check program, also committed to adopt and implement California's Enhanced I/M in the urbanized portions of the South Coast, Southeast Desert, Ventura, Sacramento Region, San Joaquin Valley, and San Diego. The 1994 SIP identified emission reduction targets for the program in all of these areas, except San Diego (which used Enhanced I/M as a contingency measure). The applicable plan for the South Coast, the 1999 Ozone SIP, continued to rely on reductions from Smog Check II for progress and attainment.

On July 12, 2000, ARB released a report evaluating California's Enhanced I/M program. This report found that although Smog Check II is achieving significant emission reductions, it is not providing all of the benefits anticipated in the Ozone SIP. This shortfall affects the Enhanced I/M commitment in the SIP, the on-road motor vehicle emissions used for transportation conformity purposes, and attainment of the federal one-hour ozone standard.

California Environmental Protection Agency

Improvements to the Smog Check II Program

In our July report, we identified a number of options for improving the Enhanced I/M program. BAR and ARB are now committing to implement a series of near-term improvements, between September 2000 and December 2002, as described in Attachment A, "Improvements to Smog Check II." BAR's commitment is evidenced by the signature of Mr. Douglas Laue, Chief of BAR in Attachment A. These near-term improvements, within BAR's current legal authority, are:

- more stringent inspection standards for oxides of nitrogen (NOx),
- loaded-mode testing for heavy-duty gas trucks,
- improved evaporative emission testing,
- directing more vehicles to Test-Only and/or high-performing stations, and
- use of remote sensing.

These improvements will significantly reduce ozone precursors – reactive organic gases (ROG) and NOx – in each of the six regions, as measured in the inventory currency of the applicable SIP for each area. The table below summarizes the benefits statewide.

Statewide Benefits of Near-Term Smog Check II Improvements
(SIP Emission Reductions in Tons per Day)

2002		2005		2008		2010	
ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
4.5	9.3	9.2	12.4	10.4	13.7	9.9	13.2

The near-term Smog Check II improvements that we are committing to make, combined with the benefits from already adopted ARB measures, are sufficient to meet the State's emission reduction obligations for on-road motor vehicles in 2002 and 2005, in most areas. The Sacramento Region was able to demonstrate conformity in its most recent conformity analysis without the benefits of the near-term program improvements. However, the Sacramento Region and the San Joaquin Valley in 2005, and the South Coast in 2008 and 2010 will need further improvements to Smog Check II (or other measures) to meet their progress and attainment needs. We expect the upcoming SIP revision for the San Joaquin Valley will establish new commitments for emission reductions from the Smog Check II program in 2005.

In Attachment A, ARB and BAR also commit to fully satisfy the Smog Check II commitment for Sacramento in 2005, and the South Coast in 2008 and 2010, through either further program improvements or other measures. We are committed to secure these additional emission reductions by 2003, with implementation by 2004 for Sacramento and 2006 for South Coast.

ARB and BAR will work together to evaluate whether there are additional mid-term program improvements within BAR's authority that are feasible to secure the needed emission reductions. Such program improvements may include further tightening of inspection standards for all pollutants. If these emission reductions cannot be secured from within the Smog Check program, ARB will secure them from other mobile source measures. The mid-term program improvements could also be achieved through legislative action to increase the number of vehicles subject to the Smog Check II program by:

- removing the rolling 30-year model year exemption, and
- extending the program beyond the current definition of urbanized area to include all eligible vehicles registered in a nonattainment region subject to Smog Check II. This would help the Sacramento Region and the San Joaquin Valley reach attainment.

Transportation Conformity in the South Coast

One of the most critical concerns resulting from the shortfall in the Smog Check II program, and other State measures, has been the ability of the Southern California Association of Governments (SCAG) to make a positive transportation conformity finding for the South Coast Air Basin this year. To obtain federal transportation funds, the Clean Air Act (Act) requires transportation agencies to find that transportation plans conform to the SIP (i.e., emissions from transportation plans are within the motor vehicle emissions budgets established in the applicable SIP). The emissions budgets in the 1999 South Coast SIP assumed that all vehicle control measures would be fully effective; shortfalls hinder a conformity finding. Even with Smog Check II program improvements, ARB will need to secure additional emission reductions for 2008 and 2010 in the South Coast to fully meet our on-road mobile source SIP commitments.

We are providing information in this letter on the current and future effectiveness of ARB's control measures to aid in the conformity analysis and enable a positive conformity finding. This analysis relies on one federal measure -- a regulation to reduce emissions from heavy-duty diesel trucks nationally -- which U.S. EPA has adopted and will take effect in 2004. Attachment B, "Quantitative Summary of Transportation Conformity Approach," details the mix of strategies that the State is using to meet its on-road motor vehicle commitments for South Coast in the 1999 Ozone SIP. Attachment C, "Adopted Supplemental Measures," identifies measures not explicitly described in the SIP that ARB has already adopted to make up part of the emission reduction shortfalls. Attachment D, "Future Supplemental Measures," describes some of the further strategies we will pursue to complete our emission reduction SIP commitments for 2008 and 2010.

In most cases, ARB has already taken initial action to adopt the specific measure described in the original 1994 SIP, and carried over in the 1999 South Coast SIP. If an adopted measure does not achieve the full reductions in the SIP, supplemental measures to achieve emission reductions would complete the commitment. Each of these future supplemental measures described in Attachment D is directly linked to our original SIP commitment – completing one of the 1994 SIP measures.

The conformity regulations allow credit for adopted measures, partially implemented measures (to the extent that implementation is assured), and enforceable SIP commitments. We believe this package meets the requirements of the Act and the conformity regulations to assure credit for actions already taken by the State and future actions that are assured by existing, legally-enforceable SIP commitments. The table below presents our accounting of emission reductions creditable for transportation conformity purposes in the South Coast.

Transportation Conformity Accounting for the South Coast Air Basin
(Emission Reductions in Tons per Day in 1999 SIP Currency)

State and Federal On-Road Motor Vehicle Measures	2002		2005		2008		2010	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Current Smog Check Program	24.9	21.0	25.5	14.2	22.8	8.8	21.6	6.2
Smog Check Improvements	2.1	5.1	4.8	6.2	6.5	5.5	6.7	5.1
Adopted On-Road Measures	18.2	20.7	16.1	48.2	16.5	82.6	17.6	112.7
Future Supplemental Measures	--	--	--	--	6.9	--	9.6	--
Remaining Long-Term Measures (M-17 and Advanced Technology)	--	--	--	4.0	1.0	9.0	37.8	10.0
Creditable On-Road Reductions	45.2	46.8	46.4	72.6	53.7	105.9	93.3	134.0
On-Road Reduction Target	44.3	43.5	44.3	61.9	53.7	78.4	93.3	93.9

As a regulatory agency, ARB has a long history of adopting emission control regulations in a timely and efficient manner. Whether our obligations are contained in a clean air plan such as the 1994 SIP, or a lawsuit settlement, the Board and its staff take these obligations seriously and have demonstrated both a commitment and an ability to meet those responsibilities. The Board has adopted at least twenty new measures since 1994 to fulfill its obligations, along with multiple amendments to existing regulations.

2001 Comprehensive Ozone SIP Revision for South Coast Air Basin

We commit to reconcile changes made to the emission reduction strategy for the South Coast in an upcoming, comprehensive ozone SIP revision. The SIP revision will also incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions.

Each of the agencies responsible for SIP preparation in this region – the South Coast Air Quality Management District, the Southern California Association of Governments, and the Air Resources Board has committed in writing to develop, adopt, and submit this SIP to U.S. EPA in 2001, with local adoption by October 2001. Attachment E, "2001 Comprehensive Ozone State Implementation Plan Revision for the South Coast Air Basin," documents these commitments.

In its Resolution 00-4, adopted on January 27, 2000, with the 1999 SIP for the South Coast Air Basin, the Air Resources Board said:

"Be it further resolved, that the Board directs the Executive Officer to ensure that the comprehensive SIP revision for the South Coast is developed and brought to the Board for approval and submittal to U.S. EPA in 2001."

We intend to meet this directive from our Board. ARB staff has already begun development of the state measures component of the 2001 SIP, along with the joint agency technical work on inventory and air quality modeling.

Conclusion

This letter and its attachments lay out a workable, legally-valid approach to fulfill the State's SIP commitments to reduce on-road motor vehicle emissions, from the Smog Check II program and other measures. U.S. EPA and federal transportation agencies should consider the commitments and strategy descriptions contained herein as ample evidence of the State's intent, authority, and ability to implement measures to support a positive conformity finding for the South Coast.

Ms. Felicia Marcus
August 17, 2000
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If you have any questions or need further information, please call me at (916) 445-4383 or contact Ms. Cynthia Marvin, Chief, Air Quality and Transportation Planning Branch, at (916) 322-7236.

Sincerely,

/s/

Michael P. Kenny
Executive Officer

Attachments

cc: See next page.

Ms. Felicia Marcus
August 17, 2000
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cc: (all with Attachments)

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August 17, 2000
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ATTACHMENT A IMPROVEMENTS TO SMOG CHECK II

In the 1994 California State Implementation Plan (SIP) for Ozone, the State committed to adopt and implement an Enhanced Vehicle Inspection and Maintenance (I/M) Program in the urbanized portions of the South Coast, Southeast Desert, Ventura, Sacramento Region, San Joaquin Valley, and San Diego. The SIP also identified specific emission reduction targets -- in each milestone and attainment year for reactive organic gases (ROG) and nitrogen oxides (NOx) -- that the program must achieve in all of these areas, except San Diego (which relied on Enhanced I/M as a contingency measure only). The California Department of Consumer Affairs' Bureau of Automotive Repair (BAR) then adopted regulations in 1995 and 1996 to implement this program, which is currently underway. The U.S. Environmental Protection Agency approved the 1994 SIP for all six areas, plus a subsequent 1999 SIP revision for the South Coast Air Basin that continued to rely on this inspection and maintenance program.

A July 12, 2000 report by the Air Resources Board (ARB) entitled "Final Evaluation of California's Enhanced Vehicle Inspection and Maintenance Program (Smog Check II)," quantified the effectiveness of the current Smog Check II program and found that the program was not achieving the full emission reductions anticipated in the SIP. The report also identified a series of potential options to increase the effectiveness of the program. Since the release of that report, the State has determined which options it will implement to improve Smog Check II in the near-term. Further mid-term improvements are still being evaluated.

Near-Term Smog Check II Improvements

BAR will implement the following near-term program improvements, which require no statutory changes, on the schedule outlined below.

- **Lower nitrogen oxides (NOx) cut points.** Implement more stringent NOx inspection standards, by decreasing "cut points" to interim levels (approximately half way between the current cut points and the final levels envisioned in the SIP). Tighter cut points will increase the identification of high emitting vehicles and the level of repair.

Implementation Schedule:

Implement interim cut points

September - December 2000

- **Loaded mode testing for heavy-duty gas trucks.** Test compatible gas-powered heavy-duty trucks with a gross vehicle weight over 8,500 pounds under loaded-mode conditions on a dynamometer. To implement this option, ARB and BAR will need to develop criteria for determining vehicle compatibility with the

test equipment, cut points and a test protocol. BAR will also need to adopt regulations and coordinate with the Department of Motor Vehicles (DMV) to begin directing these heavy-duty trucks to loaded-mode tests.

Implementation Schedule:

Develop test protocol and select cut points	March 2001
Adopt regulations and update test equipment	August 2001
Implement heavy-duty testing	December 2001

- Improved evaporative emission testing, including a test for liquid leaks.** We will add two elements to the evaporative testing program. First, we will implement a new visual inspection test for liquid leaks. BAR has already taken the first step, inspecting vehicles for liquid leaks as part of the existing roadside test program. We will evaluate whether these inspections are sufficient to identify and repair liquid leaks. If not, a more rigorous test will be developed and implemented. We believe further evaporative emission reductions may be achieved through a low pressure test, and we will add such a test for evaporative systems to identify and repair excess ROG emissions. There are several technical issues to be resolved before this second element of the evaporative testing program improvements can be implemented. These include evaluating how to design the test to avoid inducing failures (due to pinching or damaging of hoses during testing). Therefore, this element will be phased-in over a longer time frame.

Implementation Schedule:

Liquid leak test:	
Develop liquid leak test protocol	September 2000
Adopt regulations and notify stations	February 2001
Implement program	September 2001

Low pressure test:	
Develop and evaluate test protocol	June 2001
Adopt regulations and update test equipment	December 2001
Implement test	June 2002

- Direct more vehicles to Test-Only or other high-performance stations.** The SIP assumed that up to 36 percent of vehicles would be directed to Test-Only stations. Currently, about 15 percent of vehicles subject to Smog Check are inspected at Test-Only stations. BAR studies have shown that greater emission reductions are achieved when vehicles are directed to a Test-Only station rather than a Test and Repair station. BAR has also evaluated station performance data that show that the top 25 percent of Test and Repair stations (based on relative performance) achieve similar emission reductions to Test-Only stations.

We have begun increasing the vehicles sent to Test-Only stations and will achieve further emission reductions by directing more vehicles to Test-Only stations, or if necessary other higher performing stations. In the near-term, we will increase the number of vehicles directed to Test-Only stations to 20 percent of the updated vehicle population for 2000. We will also evaluate the need to develop criteria for selecting certain Test and Repair stations as "higher performing stations" (i.e., stations that achieve emission reductions sufficiently similar to Test-Only). We will then increase the number of vehicles directed to Test-Only and/or high performing Test and Repair stations, as described below.

Implementation Schedule:

Direct 20 percent of vehicles to Test-Only based on updated vehicle population estimates beginning with January 2001 renewals	September 2000
Adopt regulations to set criteria for high performing stations (if necessary)	September 2001
Direct 30 percent of vehicles to Test-Only (or high performing stations, if necessary)	December 2001
Direct 36 percent of vehicles to Test-Only (or high performing stations, if necessary)	December 2002

- **Use remote sensing to help identify high-emitting cars.** ARB and BAR will pursue a pilot study to evaluate how we can potentially use remote sensing as part of the Smog Check program to identify high emitters for an off-cycle inspection and/or identify "clean" vehicles which could be exempted from their next inspection. Remote sensing may also be used to evaluate the efficacy of the program in future years. Because of the great interest in adding a remote sensing component to the program, we will allow sufficient time in designing the pilot program to solicit input from the public and interested stakeholders.

Implementation Schedule:

Complete pilot program design	March 2001
Start pilot program	September 2001

ARB has quantified the emission benefits of the program improvements described above. The following table shows the current Smog Check II program and projected benefits from this suite of near-term improvements in each of the six regions, using the appropriate emission inventory in the area's applicable SIP. The reductions from the current program include the benefits of BAR's new vehicle scrappage program, based on the funding provided in this year's budget. Because we are not sure how remote sensing will ultimately be incorporated into the program, no emission benefits are ascribed to that component yet.

Benefits of Smog Check II with Near-Term Improvements

(Emission reductions in tons per day in appropriate SIP currency)

Note: Italicized numbers indicate that there was no specific SIP commitment for reductions in that year.

2002	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	32.5	25.8	24.9	21.0	2.1	5.1	27.0	26.1
Ventura	1.8	2.0	1.2	1.3	0.2	0.3	1.4	1.7
Sacramento	6.3	6.5	4.0	3.5	0.5	1.0	4.5	4.5
San Joaquin	5.1	5.7	4.3	3.5	0.5	1.1	4.8	4.6
Antelope	0.6	0.5	0.4	0.3	0.1	0.1	0.4	0.4
Coachella	2.4	2.1	1.5	1.1	0.2	0.3	1.7	1.4
San Diego	11.3	8.1	7.5	5.5	1.0	1.4	8.5	6.9
Total	60.1	50.9	43.9	36.3	4.5	9.3	48.4	45.6

2005	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	31.0	18.1	25.5	14.2	4.8	6.2	30.4	20.4
Ventura	1.4	1.9	1.1	1.2	0.3	0.5	1.3	1.7
Sacramento	5.1	6.4	3.7	3.4	0.9	1.5	4.6	5.0
San Joaquin	4.2	4.6	4.2	3.4	0.9	1.8	5.1	5.1
Antelope	0.5	0.4	0.4	0.3	0.1	0.1	0.5	0.4
Coachella	2.1	2.4	1.5	1.1	0.4	0.5	1.9	1.6
San Diego	9.6	7.7	7.4	5.2	1.8	1.9	9.2	7.0
Total	53.9	41.5	43.7	28.8	9.2	12.4	52.9	41.2

2008	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	29.3	11.8	22.8	8.8	5.3/6.5*	5.5	28.1/29.3*	14.2
Ventura	1.2	2.0	0.9	1.2	0.2	0.6	1.1	1.8
Sacramento	4.9	7.0	3.3	3.4	0.9	2.0	4.3	5.4
San Joaquin	4.0	6.4	3.3	3.5	1.5	2.4	4.8	5.9
Antelope	0.5	0.4	0.3	0.3	0.1	0.1	0.5	0.4
Coachella	2.1	2.3	1.4	1.1	0.4	0.6	1.8	1.7
San Diego	9.1	8.2	6.7	5.0	1.8	2.4	8.6	7.4
Total	51.2	38.1	38.8	23.3	10.4/11.5*	13.7	49.2/50.4*	36.9

2010	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	28.3	8.8	21.6	6.2	5.3/6.7*	5.1	26.9/28.3*	11.3
Ventura	1.1	1.8	0.8	1.0	0.2	0.6	1.0	1.6
Sacramento	4.2	6.4	3.0	2.9	0.7	2.0	3.7	5.0
San Joaquin	4.8	5.9	4.2	3.2	1.8	2.4	6.0	5.6
Antelope	0.4	0.4	0.3	0.2	0.1	0.1	0.4	0.4
Coachella	1.9	2.2	1.3	1.0	0.3	0.7	1.6	1.7
San Diego	8.1	7.1	6.1	4.2	1.5	2.3	7.6	6.5
Total	48.8	32.6	37.3	18.7	9.9/11.2*	13.2	47.2/48.6*	32.0

* Second number following "/" reflects benefits of near-term plus mid-term improvements for South Coast. The mid-term improvements do not depend upon legislative changes.

Mid-Term Smog Check II Improvements or Further Measures

The near-term Smog Check II improvements that we are committing to make, combined with the benefits from already adopted ARB measures, are sufficient to meet the State's emission reduction obligations for on-road motor vehicles in 2002 and 2005, in most areas. The Sacramento Region was able to demonstrate conformity in its most recent conformity analysis without the benefit of the near-term program improvements. However, the Sacramento Region and the San Joaquin Valley in 2005, and the South Coast in 2008 and 2010 will need further improvements to Smog Check II (or other measures) to meet their progress and attainment needs. We expect the upcoming SIP revision for the San Joaquin Valley will establish new commitments for emission reductions from the Smog Check II program in 2005.

ARB and BAR remain committed to fully satisfy the Smog Check II commitment for Sacramento in 2005, and the South Coast in 2008 and 2010. We are committed to secure these additional emission reductions by 2003, with implementation by 2004 for Sacramento and 2006 for South Coast.

ARB and BAR will work together to evaluate whether there are additional mid-term program improvements within BAR's authority that are feasible to implement to secure the needed emission reductions. Such improvements might include further tightening of inspection standards for all pollutants. If these emission reductions cannot be secured from within the Smog Check program, ARB will secure them from other mobile source measures that will enhance our existing SIP commitments. Based on our experience implementing California's inspection and maintenance program, we believe that additional improvements to the Smog Check II program can achieve the needed emission reductions for Sacramento in 2005 and the South Coast in 2008 and 2010. For conformity purposes, we are relying solely on program improvements within the existing authority of BAR.

The mid-term program improvements could also be achieved through legislative action to increase the number of vehicles subject to the Smog Check II program. There is time for legislative proposals to be developed, approved, and implemented. Such proposals may include:

- Removing the rolling 30-year model year exemption. In 1997, the Legislature modified the Smog Check II program to exempt pre-1974 vehicles from the program. Beginning in January 2003, this legislation exempts motor vehicles 30 or more model-years old from all Smog Checks. Because older vehicles contribute a disproportionate amount of emissions (despite their relatively low numbers and use) excluding older vehicles from the program reduces the effectiveness of the Smog Check program. Eliminating the 30-year rolling exemption in order to keep all 1974 and newer vehicles in the program would achieve additional emission reductions in future years.

- Extending the program to all eligible vehicles registered in a nonattainment region already subject to Smog Check II. Because only urbanized areas of 50,000 or more are now subject to Smog Check II, not all vehicles in nonattainment areas are directed to loaded-mode testing. This creates inequities within the nonattainment area, particularly if many vehicles registered in the non-urbanized region commute into urban centers on a daily basis. This situation is particularly acute in the Sacramento Region because although the SIP assumed that 100 percent of the vehicles are subject to Smog Check II, in reality only the 79 percent within the Sacramento urbanized area are directed to loaded-mode testing. The other area that would significantly benefit from this proposal would be the San Joaquin Valley. Currently only 69 percent of the vehicles in the San Joaquin Valley nonattainment area are directed to loaded-mode testing.

In addition to the program improvements listed above, ARB and BAR are in the process of addressing a number of administrative loopholes, through which vehicles could evade the program, thereby reducing the benefits of the program. These loopholes, which include vehicles with incorrect ZIP codes, mismatched vehicle identification numbers, and incorrect Smog Check due dates in the DMV database, result in vehicles not being directed to obtain the proper Smog Check inspections. ARB and BAR are working closely with DMV to identify and correct these administrative loopholes.

The Bureau of Automotive Repair and the Air Resources Board will work together to ensure that the near-term improvements to the Smog Check II program are implemented on the schedule described in this attachment. We will also secure the remaining emission reductions needed to satisfy the Smog Check commitment for Sacramento in 2005, and South Coast in 2008 and 2010, through either mid-term program improvements or other measures.

/s/
Douglas Laue, Chief
Bureau of Automotive Repair

8/17/00
Date

/s/
Michael P. Kenny, Executive Officer
Air Resources Board

8/17/00
Date

ATTACHMENT B
QUANTITATIVE SUMMARY OF TRANSPORTATION CONFORMITY APPROACH
(South Coast Air Basin in 1999 SIP Currency)

State and Federal SIP Commitments								
On-Road Mobile Source Measures*	Emission Reductions (TPD)							
	2002		2005		2008		2010	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Smog Check II	32.5	25.8	31.0	18.1	29.3	11.8	28.3	8.8
Light-Duty: M1 Scrap M2 LEVII	11.8	5.9	13.3	8.7	17.6	13.4	19.4	17.1
Heavy-Duty Diesel: M4 Incentives M5 State Standard M6 Federal Standard	--	11.8	--	31.1	5.8	44.2	7.8	51.7
Long-Term Commitments: M17 Heavy-Duty Diesel Reductions Advanced Technology	--	--	--	4.0	1.0	9.0	1.0	10.0
	--	--	--	--	--	--	36.8	6.3
TOTAL ON-ROAD COMMITMENT	44.3	43.5	44.3	61.9	53.7	78.4	93.3	93.9

Reductions Creditable Toward State and Federal SIP Commitments								
Adopted SIP Measures								
– Smog Check II	24.9	21.0	25.5	14.2	22.8	8.8	21.6	6.2
– Light-Duty: M1 Scrap M2 LEVII	0	0	0.4	4.4	2.5	26.1	4.1	42.9
– Heavy-Duty Diesel: M4 Incentives M5 State Standard M6 Federal Standard	<u>4.7</u>	<u>5.5</u>	<u>5.3</u>	<u>26.6</u>	<u>5.8</u>	<u>43.4</u>	<u>5.9</u>	<u>55.9</u>
– <i>Subtotal for Adopted SIP Measures</i>	29.6	26.5	31.2	45.2	31.1	78.3	31.6	105.0
Adopted Supplemental Measures								
– Cleaner Gasoline (3 measures)	13.5	15.2	10.4	17.2	7.9	13.1	6.6	10.7
– Motorcycles	0	0	0	0	0.3	0	0.8	0.2
– Urban Transit Buses	NQ**	NQ	NQ	NQ	NQ	NQ	0	2.0
– National Heavy-Duty Gas Standards	--	--	<u>NQ</u>	<u>NQ</u>	<u>NQ</u>	<u>NQ</u>	<u>0.2</u>	<u>1.0</u>
– <i>Subtotal for Adopted New Measures</i>	13.5	15.2	10.4	17.2	8.2	13.1	7.6	13.9
Smog Check Improvements + Future Supplemental Measures								
– Smog Check Improvements***	2.1	5.1	4.8	6.2	6.5	5.5	6.7	5.1
– Future Supplemental Measures	--	--	--	--	<u>6.9</u>	<u>NQ</u>	<u>9.6</u>	<u>NQ</u>
– <i>Subtotal</i>	2.1	5.1	4.8	6.2	13.4	5.5	16.3	5.1
Long-Term Measures								
– M17 Heavy-Duty Diesel Reductions	--	--	--	4.0	1.0	9.0	1.0	10.0
– Advanced Technology	--	--	--	--	--	--	<u>36.8</u>	<u>0</u>
– <i>Subtotal</i>	--	--	--	4.0	1.0	9.0	<u>37.8</u>	<u>10.0</u>
TOTAL CREDITABLE REDUCTIONS****	45.2	46.8	46.4	72.6	53.7	105.9	93.3	134.0
SHORTFALL	0	0	0	0	0	0	0	0

*Measures M-3 and M-8 are not shown because they are baseline measures in the South Coast's 1999 SIP. Measures M-3 and M-8 have shortfalls in some years relative to the commitments in the 1994 SIP.

**NQ = not quantified.

***Smog Check improvements do not depend on legislative changes.

****Creditable reductions beyond these SIP commitments are needed to cover shortfalls in State/federal measures for other categories or sources that do not affect transportation conformity.

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ATTACHMENT C ADOPTED SUPPLEMENTAL MEASURES

Since development of the 1994 California State Implementation Plan (SIP) for Ozone, the Air Resources Board (ARB or the Board) has adopted eleven measures specifically described in that plan. The Board has also adopted many supplemental measures to reduce emissions from on-road and off-road mobile sources, including their fuels. We summarize the adopted supplemental measures below, including one promulgated at the national level, but not yet made enforceable by the State. Measures that reduce on-road vehicle emissions reflected in the applicable SIP baseline and are currently credited in conformity assessments are described in the first section. The second section discusses additional measures, which are not creditable for conformity, but illustrate ARB's ability to develop and adopt continuing regulatory enhancements on a timely and efficient basis.

Measures Creditable for Transportation Conformity

- **Control of gasoline combustion chamber deposits.** When oil refiners began producing Phase 2 cleaner-burning gasoline in 1996, they included deposit control additives to reduce combustion chamber deposits. These additives were not required by State regulation, but resulted in a decrease in NOx emissions from light and medium-duty vehicles. In 1998, the Board adopted regulations to require deposit-control additives in cleaner-burning gasoline, and assure the benefits of reduced combustion chamber deposits.
- **In-use benefits of Phase II cleaner burning gasoline.** Legislation signed in 1999 (SB 989, Sher) effectively "locks-in" the benefits of 1998 in-use fuel. Studies by ARB staff indicated that California gasoline in 1998 and 1999 was much cleaner than assumed in the 1994 SIP. Refiners certified cleaner gasoline blends than required, and produced cleaner fuels than certified.
- **Phase III cleaner burning gasoline regulations.** In 1999, the Board adopted Phase III gasoline regulations, beginning in 2003. The regulation enables refiners to produce gasoline without MTBE while providing additional air quality benefits.
- **On-road motorcycle emission standards.** In 1998, ARB adopted regulations for larger on-road motorcycles. Since ARB's adoption of the original motorcycle regulations in 1975, technological advances have shown that additional, cost-effective emission reductions are now possible. The regulations will result in a substantial reduction in hydrocarbons and, for the first time, set a standard for NOx emissions from these vehicles. The new standards will be phased-in over two tiers, with Tier 1 standard beginning in 2004 and a tighter Tier 2 beginning in 2008.

- **Emission standards for heavy-duty gasoline engines.** In 2000, the U.S. Environmental Protection Agency (U.S. EPA) adopted more stringent emission standards for new heavy-duty gasoline engines, beginning with the 2005 model year. ARB will make these standards enforceable -- in the same timeframe -- as part of our proposal for more stringent emission standards for 2007 and later model year heavy-duty diesel engines.
- **Emission standards for urban transit buses.** In 2000, the Board approved a public transit bus fleet rule and emissions standards for new urban buses beginning in 2002. This regulation requires a progressively cleaner fleet through retrofits for existing buses and tighter standards for new buses, including the introduction of zero-emission buses into the fleet by the end of the decade.

Measures Not Creditable for Transportation Conformity

- **Control of emissions from aggressive driving and air-conditioner usage.** In 1997, ARB adopted regulations to control emissions that occur when a vehicle is operated outside the Federal Test procedure, beginning in 2001. This procedure is a narrowly defined test used in certifying new vehicles to exhaust emission standards. Two supplemental test procedures -- a high-speed, high-acceleration test and an air conditioner test -- are used to control excess emissions that occur during "off-cycle" operation.
- **Marine pleasurecraft.** In 1998, ARB adopted emission standards for outboard marine and personal watercraft engines beginning in 2001. In addition to air quality benefits, these standards help avoid water contamination problems by significantly reducing the amount of unburned fuels released into the water.
- **Portable fuel containers.** In 1999, the Board approved a regulation requiring that new portable fuel containers be spill-proof and less permeable beginning in 2001. These new containers, used to refuel lawn and garden equipment, motorcycles, and watercraft, will employ an automatic shut-off feature to eliminate spillage.
- **Enhanced vapor recovery program.** In 2000, the Board adopted more stringent standards and new equipment specifications for vapor recovery systems beginning in 2001. These improvements will reduce spillage and evaporation from gasoline nozzles, make vapor recovery systems compatible with the on-board vapor recovery systems on motor vehicles, and require monitoring to ensure vapor recovery equipment systems work in the field.

ATTACHMENT D FUTURE SUPPLEMENTAL MEASURES

The Air Resources Board (ARB or Board) will develop further supplemental measures to complete our emission reduction commitments and address remaining shortfalls for defined State strategies in 2008 and 2010 for the South Coast. We will adopt these measures between 2000 and 2003, for implementation by 2006.

In most cases, ARB has already taken initial action to adopt each specific measure described in the original 1994 SIP. If an adopted measure does not achieve the full reductions in the SIP, supplemental measures would complete the emission reduction commitment. Based on our experience developing, adopting, and implementing mobile source control measures for the State of California, we believe that further supplemental measures can deliver the emission reductions needed to complete our emission reduction commitments.

We intend to reconcile changes made to the emission reduction strategy for the South Coast in an upcoming, comprehensive ozone SIP revision. The SIP revision will also incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions.

Following a description of the original SIP measure, we identify some of the supplemental measures we will pursue to fulfill remaining, defined State commitments for emission reductions from on-road mobile sources.

1. LIGHT-DUTY VEHICLES (SIP Measures M-1 and M-2)

A. Description of SIP Measures

The SIP included two ARB measures aimed at reducing emissions from new and in-use light-duty vehicles. Although the SIP commitments focused on passenger cars and light-duty trucks, the vehicle category also includes on-road motorcycles. Measure M-1 called for accelerated retirement of cars and light trucks. ARB has adopted implementing regulations for this program, however we must secure additional emission reductions to meet the SIP target. Measure M-2 called for improved control technology for new light-duty vehicles. ARB adopted the initial Low-Emission Vehicle II (LEV II) regulations under M-2 in September 1998, two years earlier than envisioned in the SIP. Although the LEV II program provided greater than anticipated NO_x benefits, we must secure additional emission reductions to meet the SIP target for ROG.

B. Supplemental Measures

- **Enhancements to the Low Emission Vehicle II Program for light-duty vehicles.** ARB will evaluate the feasibility and pursue potential emission benefits from reducing in-use running loss evaporative emissions from passenger cars and trucks. This approach would rely on the improved control technology envisioned in Measure M-2. This supplemental measure would require ARB regulatory action within the Board's authority.
- **Evaporative emission controls for on-road motorcycles.** ARB will evaluate the feasibility and pursue potential emission benefits from reducing evaporative emissions from motorcycles. This approach would rely on the improved control technology envisioned in Measure M-2. This supplemental measure would require ARB regulatory action within the Board's authority..

2. **MEDIUM-DUTY VEHICLES (SIP Measure M-3)**

A. Description of SIP Measure

Measure M-3 was based on accelerated implementation of tighter emission standards for new medium-duty vehicles. ARB adopted the measure, but additional emission reductions would help meet the original 1994 SIP target due to a calculation error that overestimated the benefits of this strategy.

B. Supplemental Measure

- **Enhancements to the Low Emission Vehicle II Program for medium-duty vehicles.** ARB will pursue aligning the LEV II standards with the federal Tier II motor vehicle standards for several sub-categories of medium-duty vehicles where the federal standards are being phased-in faster than California standards. This approach would rely on accelerated implementation of emission standards for new medium-duty vehicles as described in Measure M-3. This supplemental measure would require ARB regulatory action within the Board's authority.

3. **HEAVY-DUTY GASOLINE TRUCKS (SIP Measure M-8)**

A. Description of SIP Measure

Measure M-8 anticipated tighter emission standards for new heavy-duty gasoline trucks. ARB adopted this measure.

B. Supplemental Measure

- **Further new emission standards for heavy-duty gas trucks.** ARB will pursue lower heavy-duty gas engine emission standards patterned after U.S. EPA's recently signed final rule. This approach would rely on tighter emission standards for new heavy-duty gas trucks as described in Measure M-8. This supplemental measure would require ARB regulatory action within the Board's authority.

4. **HEAVY-DUTY TRUCKS AND BUSES (SIP Measures M-4, M-5, M-7/M-17, plus M-6)**

A. Description of SIP Measures

Three State measures in the SIP address emissions from heavy-duty trucks and buses. Measure M-4 called for incentives to increase the use of low-emission engines in existing heavy-duty diesel trucks and buses. ARB adopted guidelines for the Carl Moyer incentive program to implement this measure and the California Legislature has provided three years of funding thus far. SIP Measure M-5 describes tighter emission standards for new diesel engines in California or "...implementation of alternative measures which achieve equivalent or greater reductions." [Measure M-6 described the expected benefits of the same tighter national emission standards.] ARB and U.S. EPA have both adopted emission standards and settlement agreements with engine manufacturers that are consistent with Measures M-5 and M-6.

ARB withdrew the third State measure, M-7, which anticipated an accelerated retirement program for heavy-duty diesel engines. We replaced M-7 with the Board's commitment for new measure M-17 and submitted these changes to U.S. EPA in 1998 as revisions to the SIP. Measure M-17 is a longer-term commitment to reduce emissions from heavy-duty diesel engines through in-use compliance programs and further incentives.

B. Supplemental Measures

- **Emission reductions from school buses.** ARB will develop guidelines for implementing a program designed to encourage school districts to replace older school buses with new, lower-emitting school buses or install particulate matter retrofits on existing buses. The Governor has included \$50 million in the FY 2000-2001 budget for this program. This approach relies on incentives to increase the use of low-emitting engines and control technologies in the existing school bus fleet, consistent with the incentive programs described in Measure M-4. This supplemental measure will require ARB to adopt guidelines for use of the funds, which is within the Board's authority. The program will be a cooperative effort between the California Energy Commission, ARB, and the local air districts.

- **Retrofit in-use diesel engines with particulate filters.** Use of low-sulfur diesel fuel opens up the opportunity to reduce emissions from existing diesel engines through in-use controls such as particulate filters. ARB will pursue measures for implementation after the introduction of low-sulfur diesel fuel. This approach is consistent with the incentive programs described in Measure M-4 and the "alternative measures" described in Measure M-5 for these sources. This supplemental measure would likely require ARB regulatory action; such action is within the Board's authority.
- **Cleaner diesel fuel.** U.S. EPA has proposed to require cleaner diesel fuel nationwide starting in 2006, and expects to promulgate the regulation by the end of 2000. ARB will adopt the specifications for use in California. This approach is consistent with the "alternative measures" described in Measure M-5. This supplemental measure would require ARB regulatory action that is within the Board's authority.
- **Diesel truck standards.** U.S. EPA has proposed lower emission standards for 2007 and later heavy-duty diesel trucks, and expects to promulgate the regulation by the end of 2000. ARB will adopt these standards for new engines sold in California. This approach would rely on tighter State and national emission standards for new heavy-duty diesel trucks, as described in Measures M-5 and M-6. This supplemental State measure would require ARB regulatory action that is within the Board's authority.
- **Limit heavy-duty diesel truck idling.** ARB will pursue restrictions on truck idling to reduce ROG and NOx emissions, as well as particulate matter. This approach is consistent with the "alternative measures" described in M-5 for these sources. This supplemental measure would require ARB regulatory action that is within the Board's authority to regulate toxic air contaminants, and would also provide reductions of criteria pollutants.

ATTACHMENT E
2001 COMPREHENSIVE OZONE STATE IMPLEMENTATION PLAN REVISION
FOR THE SOUTH COAST AIR BASIN

California has previously stated its intent to develop a major revision to the ozone State Implementation Plan (SIP) for the South Coast Air Basin. This SIP revision will incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions. We intend to submit this comprehensive revision to the U.S. Environmental Protection Agency before the end of the 2001 calendar year.

This attachment includes documentation from the agencies responsible for SIP preparation in this region -- the South Coast Air Quality Management District, the Southern California Association of Governments, and the Air Resources Board. Each agency has committed in writing that we will collectively develop, adopt, and submit the comprehensive ozone SIP revision for the South Coast in 2001, with local adoption in October 2001. The following documents are included:

- August 11, 2000 letter from Barry R. Wallerstein, D.Env, Executive Officer of the South Coast Air Quality Management District to Michael Kenny, Executive Officer of the Air Resources Board
- August 16, 2000 letter from Mark Pisano, Executive Director of the Southern California Association of Governments to Felicia Marcus, Regional Administrator, U.S. Environmental Protection Agency - Region IX
- January 27, 2000 Air Resources Board Resolution 00-4

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ton H. Hickox
cy Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

2020 L Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov



Gray Davis
Governor

April 17, 2000

Mr. Mark Pisano
~~Executive~~ Director
Southern California Association of Governments
818 West Seventh Street, Twelfth Floor
Los Angeles, California 90017-3435

Dear Mr. Pisano:

With this letter, we are transmitting the Air Resources Board's (ARB's) preliminary updates to the emission control factors your agency uses to assess the conformity of your region's transportation plan and program with the State Implementation Plan (SIP). Conformity assessments rely on the California on-road motor vehicle emissions inventory model that was the basis for the region's SIP, supplemented by external control factors to account for additional vehicle and fuels measures not reflected in the model. The emission reductions expected from California's Enhanced Vehicle Inspection and Maintenance (I/M) Program – or Smog Check II – are key to the SIP.

The enclosed control factors are applicable to the output of the appropriate version of the emissions model (EMFAC7F or EMFAC7G), in the inventory "currency" of the applicable SIP for each nonattainment area. We provide factors for each of the federally-defined milestone years from 2002 out to 2010, for the ozone precursors – hydrocarbons or reactive organic gases (ROG) and nitrogen oxides (NOx). Consistent with existing procedures, the 2010 factors should also be used for post-2010 analyses. The enclosed control factors replace the ones we transmitted in 1996.

Enhanced I/M Program Evaluation

Under State and federal law, ARB is required to evaluate and report on the effectiveness of the Enhanced I/M program. The draft report compares the current program against our expectations at the time the program was included in the State Implementation Plan (SIP). We used a California-specific method to develop a realistic, quantitative assessment of the program. The draft report will be released shortly for review and comment on our website at <http://www.arb.ca.gov/html/smog.htm>, along with notice of a public workshop. We expect to provide a final report to the Legislature and the U.S. Environmental Protection Agency in June 2000.

The preliminary factors are consistent with the upcoming draft report, relying on data from random roadside inspections to assess benefits of Enhanced I/M in 1999, and the

California Environmental Protection Agency

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Mr. Mark Pisano

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draft EMFAC2000 model to project program benefits in the future. We converted the results back into the appropriate SIP currency so the factors can be applied directly to the model output. The results show a shortfall in the anticipated emission reductions from the Enhanced I/M program in some areas and years, based on program implementation actions and legislative changes. The draft evaluation report describes each of the elements that contributed to the Enhanced I/M shortfall in 1999. Because the State lowered the NOx cut points following the roadside testing, the existing program is achieving more NOx benefits today than in 1999. This improvement is reflected in the enclosed preliminary control factors.

Following release of the final Enhanced I/M report, we will communicate with you in writing to either: (1) confirm that the preliminary control factors remain appropriate, or (2) provide revised factors based on any anticipated improvements in the effectiveness of the Enhanced I/M program in future years.

Benefits of Other Vehicles and Fuels Measures

We have also examined the current and projected effectiveness of the rest of California's motor vehicle and fuels program in reducing on-road motor vehicle emissions, relative to each area's SIP commitments. ARB's programs are providing additional reductions not previously relied upon in the SIP that help mitigate any shortfall from the Enhanced I/M program. The enclosed control factors include the full benefit of these adopted measures and enforceable SIP commitments for use in conformity assessments. Where net shortfalls do exist and affect your ability to demonstrate conformity, we will work with you to address them.

Finally, because the preliminary control factors for the Enhanced I/M program are based on the draft program evaluation, we may need to revise the factors based on the final report.

Basic I/M Program Evaluation

The updated conformity factors for each nonattainment region account for the subset of the fleet that is within the urbanized portion and therefore subject to Enhanced I/M. We are also addressing questions about the effectiveness of California's Basic I/M program that applies outside the urbanized areas and in less polluted nonattainment regions.

Since EMFAC7F and EMFAC7G emission models were developed, there have also been changes to the Basic I/M program. These changes include legislative exemption of the oldest and newest vehicles from the program, as well as the addition of an inspection for excess evaporative emissions based on a gas cap check. Based on the latest vehicle testing reflected in the draft EMFAC2000 model, we conclude that the Basic I/M program being implemented today is providing emission reductions at least equal to the levels assumed for the 1990 Basic I/M program in the EMFAC7F and

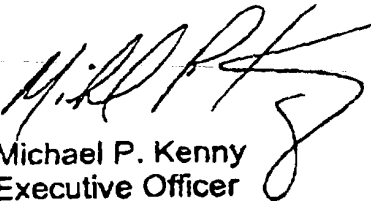
Mr. Mark Pisano
April 17, 2000
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EMFAC7G models. Thus, there is no need to adjust the model outputs used in your conformity assessments for the Basic I/M areas.

There is no net loss of ROG reductions under the current Basic program, even with the vehicle exemptions, because of the added gas cap testing and repair to reduce evaporative emissions. There is a small reduction in NOx emissions from exempting just the subset of pre-1974 vehicles from the Basic test program because repairs made to lower ROG and carbon monoxide emissions in older carbureted vehicles tend to increase NOx emissions. We will re-evaluate these conclusions after the EMFAC2000 model is finalized, and advise you if there are any changes that may impact your conformity assessments.

If you have questions about this letter, please contact me at (916) 445-4383 or have your staff contact Ms. Cynthia Marvin, Chief, Air Quality and Transportation Planning Branch, at (916) 322-7236.

Sincerely,



Michael P. Kenny
Executive Officer

Enclosure

cc: See next page.

Mr. Mark Pisano
April 17, 2000
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cc: (w/enclosures)
Mr. Richard H. Baldwin
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Sacramento, California 95814

Control Factors for California Ozone SIP Measures*

Antelope Federal Nonattainment Area

2002

	HD Diesel Adjustments	Enhanced Insp/Mainl	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.009	0.106	0.046	0.152
Medium Duty Trucks	0.000	0.092	0.058	0.150
Heavy-Duty Gasoline Trucks	0.000	0.044	0.058	0.102
Heavy-Duty Diesel Vehicles	0.445	0.000	0.149	0.594
Motorcycles	0.000	0.000	0.036	0.036
NOx				
Light Duty Passenger and Trucks	0.000	0.095	0.045	0.140
Medium Duty Trucks	0.000	0.084	0.106	0.190
Heavy-Duty Gasoline Trucks	0.000	0.000	0.104	0.104
Heavy-Duty Diesel Vehicles	0.083	0.000	0.039	0.122
Motorcycles	0.000	0.000	0.050	0.050

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Antelope Federal Nonattainment Area

2005

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.109	0.047	0.156
Medium Duty Trucks	0.000	0.087	0.100	0.187
Heavy-Duty Gasoline Trucks	0.000	0.048	0.085	0.132
Heavy-Duty Diesel Vehicles	0.484	0.000	0.151	0.635
Motorcycles	0.000	0.000	0.085	0.085
NOX				
Light Duty Passenger and Trucks	0.000	0.096	0.077	0.173
Medium Duty Trucks	0.000	0.091	0.227	0.318
Heavy-Duty Gasoline Trucks	0.000	0.000	0.208	0.208
Heavy-Duty Diesel Vehicles	0.131	0.000	0.178	0.309
Motorcycles	0.000	0.000	0.125	0.125

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7F.

Control factors updated April 17, 2000.

4/17/00

Control Factors for California Ozone SIP Measures*

Antelope Federal Nonattainment Area

2007

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.122	0.063	0.185
Medium Duty Trucks	0.000	0.105	0.174	0.279
Heavy-Duty Gasoline Trucks	0.000	0.051	0.100	0.151
Heavy-Duty Diesel Vehicles	0.501	0.000	0.155	0.656
Motorcycles	0.000	0.000	0.290	0.290
NOx				
Light Duty Passenger and Trucks	0.000	0.099	0.184	0.283
Medium Duty Trucks	0.000	0.107	0.432	0.538
Heavy-Duty Gasoline Trucks	0.000	0.000	0.253	0.253
Heavy-Duty Diesel Vehicles	0.141	0.000	0.232	0.373
Motorcycles	0.000	0.000	0.237	0.237

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

4/17/00

Control Factors for California Ozone SIP Measures*

Antelope Federal Nonattainment Area

2010

	HD Diesel Adjustments	Enhanced Insp/Maini	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.126	0.083	0.209
Medium Duty Trucks	0.000	0.084	0.258	0.342
Heavy-Duty Gasoline Trucks	0.000	0.053	0.130	0.183
Heavy-Duty Diesel Vehicles	0.517	0.000	0.158	0.675
Motorcycles	0.000	0.000	0.444	0.444
NOx				
Light Duty Passenger and Trucks	0.000	0.090	0.290	0.380
Medium Duty Trucks	0.000	0.087	0.569	0.655
Heavy-Duty Gasoline Trucks	0.000	0.000	0.296	0.296
Heavy-Duty Diesel Vehicles	0.159	0.000	0.302	0.461
Motorcycles	0.000	0.000	0.358	0.358

* Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Coachella Federal Nonattainment Area

2002

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.098	0.045	0.144
Medium Duty Trucks	0.000	0.082	0.059	0.141
Heavy-Duty Gasoline Trucks	0.000	0.046	0.058	0.104
Heavy-Duty Diesel Vehicles	0.445	0.000	0.149	0.594
Motorcycles	0.000	0.000	0.038	0.038
NOx				
Light Duty Passenger and Trucks	0.000	0.079	0.046	0.125
Medium Duty Trucks	0.000	0.069	0.108	0.177
Heavy-Duty Gasoline Trucks	0.000	0.000	0.104	0.104
Heavy-Duty Diesel Vehicles	0.083	0.000	0.028	0.111
Motorcycles	0.000	0.000	0.050	0.050

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Coachella Federal Nonattainment Area

2005

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.103	0.047	0.150
Medium Duty Trucks	0.000	0.083	0.100	0.183
Heavy-Duty Gasoline Trucks	0.000	0.047	0.085	0.132
Heavy-Duty Diesel Vehicles	0.484	0.000	0.151	0.635
Motorcycles	0.000	0.000	0.098	0.098
NOx				
Light Duty Passenger and Trucks	0.000	0.080	0.077	0.157
Medium Duty Trucks	0.000	0.075	0.267	0.341
Heavy-Duty Gasoline Trucks	0.000	0.000	0.253	0.253
Heavy-Duty Diesel Vehicles	0.141	0.000	0.221	0.362
Motorcycles	0.000	0.000	0.125	0.125

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Coachella Federal Nonattainment Area

2007

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.117	0.063	0.180
Medium Duty Trucks	0.000	0.096	0.175	0.271
Heavy-Duty Gasoline Trucks	0.000	0.048	0.104	0.152
Heavy-Duty Diesel Vehicles	0.501	0.000	0.155	0.656
Motorcycles	0.000	0.000	0.290	0.290
NOx				
Light Duty Passenger and Trucks	0.000	0.083	0.187	0.270
Medium Duty Trucks	0.000	0.088	0.441	0.528
Heavy-Duty Gasoline Trucks	0.000	0.000	0.254	0.254
Heavy-Duty Diesel Vehicles	0.141	0.000	0.221	0.362
Motorcycles	0.000	0.000	0.237	0.237

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures***Coachella Federal Nonattainment Area****2010****ROG**

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
Light Duty Passenger and Trucks	0.000	0.122	0.082	0.204
Medium Duty Trucks	0.000	0.078	0.261	0.339
Heavy-Duty Gasoline Trucks	0.000	0.048	0.134	0.182
Heavy-Duty Diesel Vehicles	0.517	0.000	0.158	0.675
Motorcycles	0.000	0.000	0.443	0.443

NOx

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
Light Duty Passenger and Trucks	0.000	0.075	0.293	0.368
Medium Duty Trucks	0.000	0.071	0.578	0.650
Heavy-Duty Gasoline Trucks	0.000	0.000	0.296	0.296
Heavy-Duty Diesel Vehicles	0.159	0.000	0.296	0.455
Motorcycles	0.000	0.000	0.358	0.358

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7F.

Control factors updated April 17, 2000.

4/17/00

Control Factors for California Ozone SIP Measures*

Ventura Federal Nonattainment Area

2002

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.095	0.041	0.136
Medium Duty Trucks	0.000	0.085	0.058	0.143
Heavy-Duty Gasoline Trucks	0.000	0.043	0.058	0.102
Heavy-Duty Diesel Vehicles	0.445	0.000	0.149	0.594
Motorcycles	0.000	0.000	0.037	0.037
NOx				
Light Duty Passenger and Trucks	0.000	0.091	0.045	0.136
Medium Duty Trucks	0.000	0.080	0.106	0.186
Heavy-Duty Gasoline Trucks	0.000	0.000	0.104	0.104
Heavy-Duty Diesel Vehicles	0.084	0.000	0.034	0.118
Motorcycles	0.000	0.000	0.050	0.050

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Ventura Federal Nonattainment Area

2005

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.094	0.042	0.136
Medium Duty Trucks	0.000	0.071	0.109	0.180
Heavy-Duty Gasoline Trucks	0.000	0.045	0.089	0.134
Heavy-Duty Diesel Vehicles	0.484	0.000	0.151	0.635
Motorcycles	0.000	0.000	0.096	0.096
NOX				
Light Duty Passenger and Trucks	0.000	0.092	0.077	0.169
Medium Duty Trucks	0.000	0.086	0.228	0.314
Heavy-Duty Gasoline Trucks	0.000	0.000	0.208	0.208
Heavy-Duty Diesel Vehicles	0.131	0.000	0.172	0.303
Motorcycles	0.000	0.000	0.125	0.125

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

4/17/00

Control Factors for California Ozone SIP Measures*

Ventura Federal Nonattainment Area

2008

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.105	0.059	0.164
Medium Duty Trucks	0.000	0.089	0.204	0.293
Heavy-Duty Gasoline Trucks	0.000	0.050	0.111	0.162
Heavy-Duty Diesel Vehicles	0.501	0.000	0.155	0.656
Motorcycles	0.000	0.000	0.289	0.289
NOx				
Light Duty Passenger and Trucks	0.000	0.095	0.186	0.281
Medium Duty Trucks	0.000	0.101	0.434	0.536
Heavy-Duty Gasoline Trucks	0.000	0.000	0.254	0.254
Heavy-Duty Diesel Vehicles	0.141	0.000	0.226	0.367
Motorcycles	0.000	0.000	0.237	0.237

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

South Coast Nonattainment Area

2002

	Enhanced Insp/Maint**	State/Fed Measures	Total Factor
ROG			
Light Duty Passenger and Trucks	-0.035	0.052	0.016
Medium Duty Trucks	-0.033	0.046	0.014
Heavy-Duty Gasoline Trucks	0.010	0.049	0.058
Heavy-Duty Diesel Vehicles	0.000	0.279	0.279
Motorcycles	0.000	0.038	0.038
NOx			
Light Duty Passenger and Trucks	-0.020	0.051	0.031
Medium Duty Trucks	-0.008	0.050	0.042
Heavy-Duty Gasoline Trucks	0.000	0.050	0.050
Heavy-Duty Diesel Vehicles	0.000	0.028	0.028
Motorcycles	0.000	0.050	0.050

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7G.

**Negative control factors for I/M indicate increased emissions over those in the EMFAC 7G baseline.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures*

Ventura Federal Nonattainment Area

2010

	HD Diesel Adjustments	Enhanced Insp/Maint	State/Fed Measures	Total Factor
ROG				
Light Duty Passenger and Trucks	0.000	0.106	0.078	0.184
Medium Duty Trucks	0.000	0.065	0.304	0.370
Heavy-Duty Gasoline Trucks	0.000	0.054	0.144	0.198
Heavy-Duty Diesel Vehicles	0.517	0.000	0.158	0.675
Motorcycles	0.000	0.000	0.442	0.442
NOx				
Light Duty Passenger and Trucks	0.000	0.086	0.290	0.376
Medium Duty Trucks	0.000	0.082	0.571	0.654
Heavy-Duty Gasoline Trucks	0.000	0.000	0.296	0.296
Heavy-Duty Diesel Vehicles	0.159	0.000	0.298	0.457
Motorcycles	0.000	0.000	0.358	0.358

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7F.

Control factors updated April 17, 2000.

Control Factors for California Ozone SIP Measures***2005****South Coast Nonattainment Area**

	Enhanced Insp/Maint**	State/Fed Measures	Total Factor
ROG			
Light Duty Passenger and Trucks	-0.054	0.055	0.001
Medium Duty Trucks	-0.039	0.087	0.048
Heavy-Duty Gasoline Trucks	-0.010	0.051	0.041
Heavy-Duty Diesel Vehicles	0.000	0.373	0.373
Motorcycles	0.000	0.048	0.048
NOx			
Light Duty Passenger and Trucks	-0.018	0.086	0.068
Medium Duty Trucks	-0.007	0.107	0.100
Heavy-Duty Gasoline Trucks	0.000	0.069	0.069
Heavy-Duty Diesel Vehicles	0.000	0.190	0.190
Motorcycles	0.000	0.069	0.069

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7G.

**Negative control factors for I/M indicate increased emissions over those in the EMFAC 7G baseline.

Control factors updated April 17, 2000.

April 17, 2000

Control Factors for California Ozone SIP Measures* South Coast Nonattainment Area

2008

	Enhanced Insp/Maint**	State/Fed Measures	Total Factor
ROG			
Light Duty Passenger and Trucks	-0.075	0.072	-0.003
Medium Duty Trucks	-0.047	0.130	0.084
Heavy-Duty Gasoline Trucks	-0.033	0.054	0.021
Heavy-Duty Diesel Vehicles	0.000	0.402	0.402
Motorcycles	0.000	0.156	0.156
NOx			
Light Duty Passenger and Trucks	-0.017	0.189	0.172
Medium Duty Trucks	-0.006	0.275	0.270
Heavy-Duty Gasoline Trucks	0.000	0.069	0.069
Heavy-Duty Diesel Vehicles	0.000	0.327	0.327
Motorcycles	0.000	0.097	0.097

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted from in EMFAC 7G.

**Negative control factors for I/M indicate increased emissions over those in the EMFAC 7G baseline.

Control factors updated April 17, 2000.

April 17, 2000

Control Factors for California Ozone SIP Measures* South Coast Nonattainment Area 2010

	Enhanced Insp/Main**	State/Fed Measures	On Road Black Box	Total Factor
ROG				
Light Duty Passenger and Trucks	-0.088	0.090	0.241	0.242
Medium Duty Trucks	-0.053	0.167	0.213	0.328
Heavy-Duty Gasoline Trucks	-0.051	0.227	0.199	0.375
Heavy-Duty Diesel Vehicles	0.000	0.408	0.143	0.551
Motorcycles	0.000	0.221	0.188	0.409
NOx				
Light Duty Passenger and Trucks	-0.016	0.287	0.019	0.290
Medium Duty Trucks	-0.005	0.406	0.016	0.417
Heavy-Duty Gasoline Trucks	0.000	0.199	0.021	0.220
Heavy-Duty Diesel Vehicles	0.000	0.416	0.015	0.432
Motorcycles	0.000	0.199	0.021	0.220

*Apply these fractions to emissions estimates by vehicle class to calculate emission reductions from state and federal measures not accounted for in EMFAC 7G.

**Negative control factors for I/M indicate increased emissions over those in the EMFAC 7G baseline.

Control factors updated April 17, 2000.

April 17, 2000